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WELCOME JULY 2021

The tragic story of *Titanic* – shown here leaving Southampton on its maiden voyage – continues to resonate

In the early hours of 15 April 1912, RMS *Titanic* sank into the icy depths of the Atlantic Ocean with the loss of more than 1,500 lives. Since its tragic sinking, *Titanic* has remained a subject of huge public interest and its story continues to resonate today – more than a century later – with countless books, films and exhibitions exploring every facet of the disaster. **We've teamed up with *Titanic* expert Tim Maltin to explore the 'ship of dreams' in more detail** – from its construction in Belfast and life on board, to passenger stories and its dramatic rediscovery in 1985. Turn to page 28 to get started.

Elsewhere, we explore **how a homosexual biochemist of Jewish heritage – Otto Warburg – came to be of such importance to Adolf Hitler** (*page 61*), and head to the medieval period to find out where, and how, some of the collective nouns we still use today – a pack of hounds, a stud of horses – first originated (*page 66*).

Also in this issue, we examine **how the world might have looked had the Vikings never ventured overseas** (*page 70*), chart the brief, nine-day reign of Lady Jane Grey (*page 16*) and explore the tragically short life and career of one of the most dynamic and prolific poets of the 20th century: Sylvia Plath (*page 24*).

I'm also excited to share **our new monthly column, penned by Danny Robins**, writer and presenter of the BBC Radio 4 podcast *The Battersea Poltergeist*. Each month, Danny will explore a paranormal cold case from history – starting with a poltergeist haunting that made national headlines and was even discussed by the Home Secretary in the House of Commons (*page 19*).

Until next month, stay safe!

Charlotte Hodgman
Editor

THIS MONTH'S BIG NUMBERS

705
The number of people who survived the sinking of RMS *Titanic* in April 1912

9
The number of days that Lady Jane Grey reigned as queen – from 10–19 July 1553

5,398
The number of objects found in the tomb of Tutankhamun upon its discovery in 1922

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ON THE COVER: GETTY IMAGES X3, ALAMY X3 - ON THIS PAGE: GETTY IMAGES X1, JENI NOTT X1

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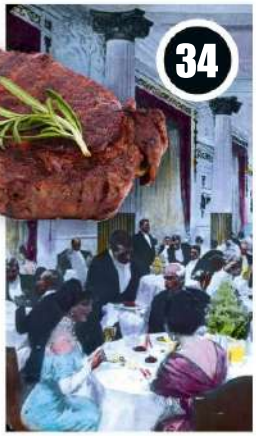
▲ Inside the remarkable career of German biochemist Otto Warburg

GETTY IMAGES X8, ALAMY X8, TITANIC HISTORICAL SOCIETY X1

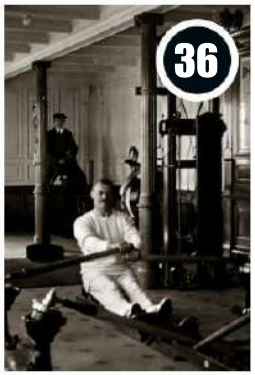
◀ Did the band really carry on playing as the ship went down? We answer some of the biggest questions about *Titanic*'s demise



▲ Discover what was on the menu for wealthy passengers

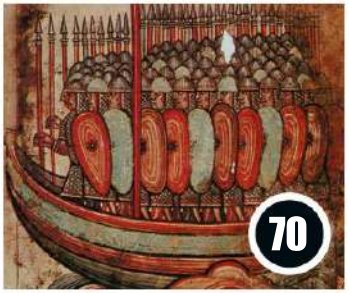
▲ Inside the decades-long search for *Titanic*'s remains

▼ The personal stories of those who survived and died



▲ Examine rare snapshots taken on board the liner

▲ What can collective nouns tell us about life in medieval England?



▲ Find out how the Vikings left their mark on politics, culture and language

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SNAPSHOTS

1964 FREEWHEELIN'

Bob Dylan, widely considered to be one of the world's greatest living songwriters, is seen here near Woodstock in 1964, along with tour manager Victor Maymudes (*left*) and fellow folk singer and friend Bob Neuwirth (*right*). Born Robert Zimmerman in 1941, Dylan became a leading figure in the counterculture movement of the 1960s, first plying his trade in the Greenwich Village district of New York City. Even before Woodstock became synonymous with the 1969 music festival of the same name (actually held 40 miles away), it was a favourite retreat for artists like Dylan. Only a short drive from the Big Apple, the town was the ideal place for young musicians to escape and get their creative juices flowing.

BBC RADIO 4

Marking his 80th birthday, a five-part BBC Radio 4 series on Bob Dylan's life, music, and influence – *It Ain't Me You're Looking For: Bob Dylan at 80* – is now available on BBC Sounds. Listen at *bbc.co.uk/sounds/series/m000w331*

GETTY IMAGES

COBRA
COBRA
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SNAPSHOTS

1977
POSE FOR PRIDE

Beaming with joy, a group of men participate in San Francisco's 1977 Pride Parade – a celebration and gathering of the city's LGBTQ community. Now part of a fully fledged festival spanning a whole weekend, the city's Pride marches have taken place annually since 1972, and are among the largest of their kind in the United States. Like many similar occasions around the world, the celebrations are held in June to commemorate the anniversary of the 1969 Stonewall riots, when members of New York's LGBTQ community protested against a police raid on a Manhattan gay bar. Half a century later, it is seen as a pivotal moment for the LGBTQ movement globally.

ALAMY

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100's

SNAPSHOTS

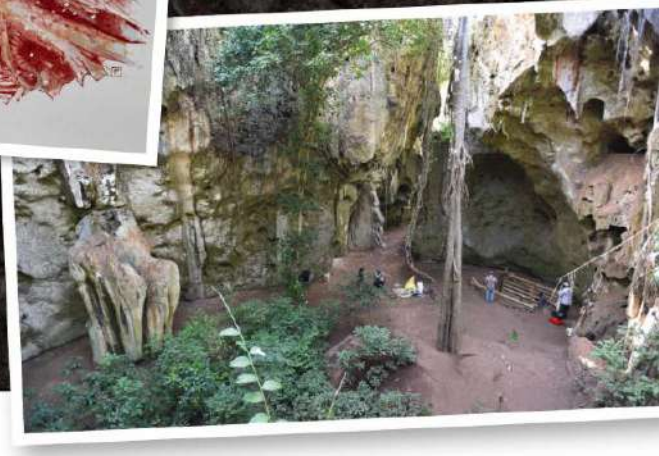
1932
PICKING UP SPEED

Weaving their way around a mock-Alpine terrain, a group of holidaymakers enjoy the thrills and spills of the new Scenic Railway at Great Yarmouth Pleasure Beach. Originally built for the Paris Colonial Exposition in 1931, the rollercoaster was purchased by Pleasure Beach owner Pat Collins, who had it dismantled and rebuilt at his Norfolk amusement park the following year. The structure, which is Grade II-listed, still attracts excited riders every summer and remains one of only eight wooden scenic railways in operation worldwide. Lacking brakes, the park has to employ a 'brakeman', who sits with the passengers and controls the speed of the train to ensure it makes it back to the station safely.

GETTY IMAGES

THINGS WE LEARNED THIS MONTH...

RECENT HISTORY HEADLINES THAT CAUGHT OUR EYE



CHILD BURIAL IS AFRICA'S OLDEST

A prehistoric grave found in Kenya eight years ago has been confirmed as Africa's earliest known human burial. First discovered inside the Panga ya Saidi cave complex in 2013, analysis of the remains has concluded they belonged to a two or three-year-old child who died around 76,000 BC. Since nicknamed 'Mtoto' by archaeologists – the Swahili word for 'child' – the infant was wrapped in a shroud, with a pillow or support placed under their head. Until the discovery, early burials had been a missing part of the human story in Africa.

FERNANDO FUEYO, JORGE GONZÁLEZ/ELENA SANTOS, MOHAMMAD JAVAD SHOAEE. ROYAL COLLECTION TRUST © HER MAJESTY QUEEN ELIZABETH II - 2021 / BRIDGEMAN IMAGES, GETTY IMAGES X2. AYDIN PROVINCIAL DIRECTOR OF CULTURE AND TOURISM /ADNAN MENDERES UNIVERSITY

THE FACE OF A QUEEN, BUT WHICH?

A 1540 miniature long thought to depict Catherine Howard, Henry VIII's fifth wife, may actually be of her predecessor Anne of Cleves. According to a new study by art historian Franny Moyle, Hans Holbein's choice to mount the miniature on a four of diamonds playing card was a nod to her status as the king's fourth spouse. Moyle also claims the sitter bears a striking similarity to another portrait of Anne, completed in 1539, and points to the fact that the subject appears several years older than Catherine would have been at the time.

TURKEY'S OWN COLOSSEUM

The remains of an ancient amphitheatre, similar to Rome's famous Colosseum, have been unearthed in Turkey. Found near the ancient city of Mastaura, the arena is believed to have been capable of holding around 20,000 spectators, who would have gathered there to watch animal fights and gladiatorial combat. With much of the 1,800-year-old structure still buried underground, archaeologists plan to carry out a series of geophysical surveys in order to construct a 3D model of the venue and understand more about its past.

MUSEUM TO HONOUR ACCUSED WITCHES

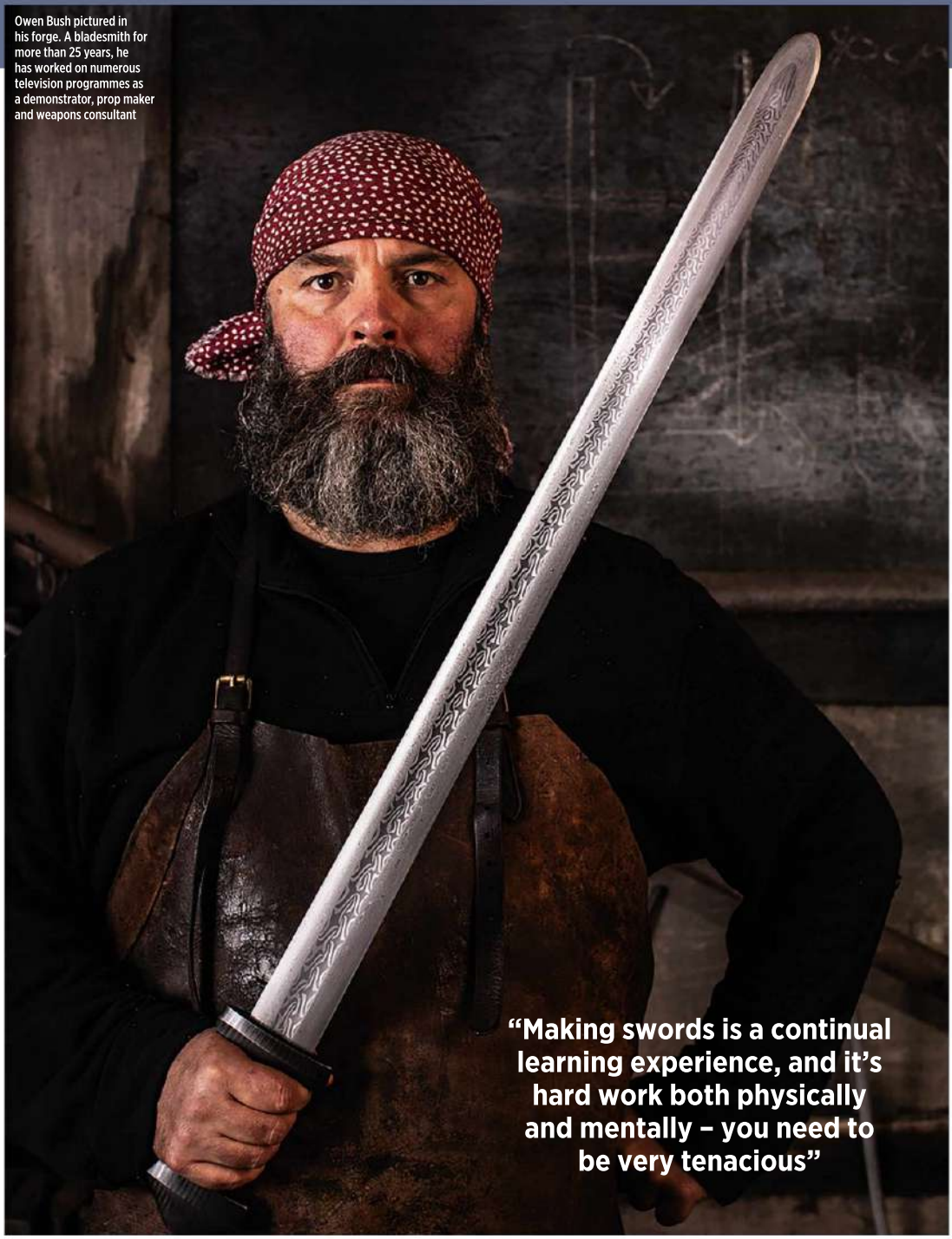
Plans for a new museum commemorating people convicted of witchcraft have been put forward by a Scottish campaign group. Witches of Scotland originally proposed erecting a memorial to the 2,500 people executed under the country's Witchcraft Act between 1563 and 1736. However, the group has now expanded its plans to include a fully fledged museum, educating visitors about the experiences of those accused and convicted. The campaigners previously lodged a petition with the Scottish government in March, calling for an official pardon and apology for victims.

10,000

The number of mother-of-pearl sequins that adorn Princess Diana's wedding dress. The garment is now on display – for the first time in decades – at Kensington Palace

GIANT'S NOT SO OLD AFTER ALL

Dorset's iconic Cerne Abbas giant is much younger than previously believed, claims a new scientific study. Initially thought to date from prehistory, analysis of soil samples has shown that the naked chalk figure was actually created during the late Saxon period – between 700 and 1100 AD. The fact it is not mentioned in later abbey records has led experts to theorise that over time, the land around the giant was neglected, and that it was hidden before being rediscovered. The 55-metre tall figure is cared for by the National Trust, but who it actually represents remains a mystery.


"Making swords is a continual learning experience, and it's hard work both physically and mentally – you need to be very tenacious"

Owen Bush pictured in his forge. A bladesmith for more than 25 years, he has worked on numerous television programmes as a demonstrator, prop maker and weapons consultant

GAVIN BUSH X3

Bladesmith

Owen Bush

HOW DID YOU FIRST GET INTERESTED IN SWORDS?
I have always been interested in swords, initially more from reading fiction as a teenager than from history. I must admit that when I am creating swords, the lines between fantasy and history can still get a bit blurry, but as soon as I started learning about 'real' swords, the history started flooding in. To understand swords, you really need to understand their origins.

WHERE DID YOU LEARN ENOUGH ABOUT BLADESMITHING TO MAKE IT YOUR CAREER?
Initially, like most people who start making swords, I built my own basic forge and had a go – my first attempts were not very good. I did, however, stick with it and got hooked. In 1994, I went to a blacksmithing school in Hereford for a year, before then going out to the ABS (American Bladesmiths Society) school in Texarkana, Texas. Making swords is a continual learning experience, and it's hard work both physically and mentally – you need to be very tenacious. I am still learning, more than 25 years after I first started.

DO YOU HAVE A FAVOURITE SWORD FROM HISTORY?
There are so many amazing swords from almost every period of history. However, one that has always particularly inspired me is the Sutton Hoo sword in the British Museum, and the copy of the blade made by Scott Langton. It's a really complex and beautiful pattern-welded sword with some amazing hilt fittings. Whenever I look at it, I get a picture in my head of what it must have been like being a Saxon lord in all of his battle splendour.

HOW DO YOU ENSURE THAT YOUR HISTORICAL PIECES ARE ACCURATE?
I make a lot of different swords – some are pure fantasy, some are historical pieces, and some are historically inspired. I have documented many original swords in museums across the UK and abroad. This involves measuring, weighing and photographing the swords, taking great care to look after these amazing pieces of history. We no longer fight battles with blades, so if you want to understand historical swords you need to spend time looking at authentic examples. Even if I am making a fantasy sword, I like to have a great deal of reality built into it; original swords are the only appropriate starting point to put the dimensions and 'feel' of the weapon into context.

MAIN: Owen has run his own bladesmithing school since 2008, where he is able to share his passion for the craft with others

INSET: Detail from an 11.5-inch seax made by Owen using authentic Saxon techniques

WHAT IS THE FAVOURITE SWORD YOU HAVE MADE?
I really love making Saxon swords and seaxes (Saxon long knives), which are made with pattern-welded blades. I always like the fact that I might sometimes be one of the first people in modern history to reconstruct a particular Saxon sword pattern.

WHAT ARE THE BEST AND WORST THINGS ABOUT BEING A BLADESMITH?
I am happy to say I love my work. There is never a boring moment and the satisfaction from making things is immediate. Having said that, there is no hiding mistakes, and you have to get used to pieces failing – especially if you are pushing yourself technically. It's physically hard work, but I kind of love that as well.

WHAT WOULD YOU SUGGEST TO ANYONE INTERESTED IN BECOMING A BLADESMITH?
Do your research and have a go! There are now lots of classes and it's a very different situation to when I started. Take a class and see if the reality of forging lives up to your idea of it. The most important thing is to start making something – I suggest leatherwork, as the tools are cheap. Using your hands is a great way to interact with the world around you and to explore history.

OWEN BUSH is a professional bladesmith based in Welling, Kent. He is the owner of the BushFire Forge School of Bladesmithing, where he teaches a number of one, three and five-day courses. Find out more at *owenbush.co.uk*

Lady Jane Grey gains (and loses) the throne of England

Words: Rhiannon Davies

On 9 July 1553, Lady Jane Grey was called to Syon House, her father-in-law's opulent home near London, to receive life-changing news. As she entered the building and saw a throng of courtiers gathered, her body started to shake. When her father-in-law escorted her to the throne and told her that she was to be the next queen of England, the crowd around her dropped to their knees – and Jane fell to the floor in a dead faint.

Once she'd recovered, she announced: "The crown is not my right. It pleases me not. Mary is the rightful heir." Although those around her swatted away her objections, Jane's words were remarkably prescient. Nine days after she ascended the throne, Mary was made queen, and Jane was made a prisoner in the Tower of London.

Jane stands with her husband Lord Guildford Dudley as nobles pressure her to take the crown. It was never something she had sought for herself

GETTY IMAGES X4

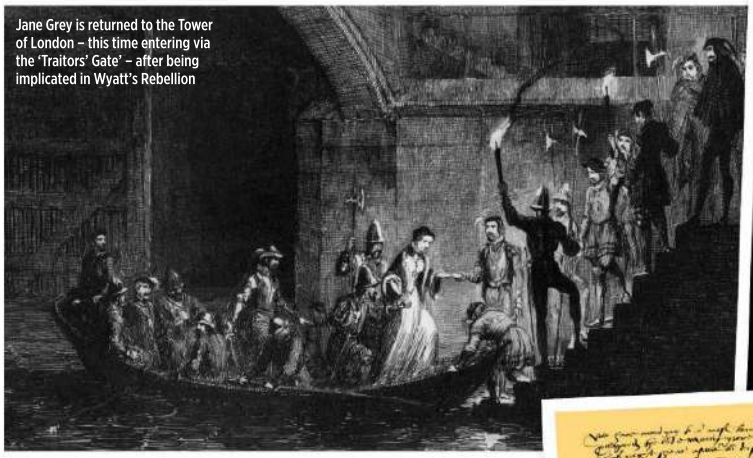
AN AMBITIOUS IN-LAW

When Jane was born in 1537, no one seriously thought she would one day be offered the throne of England. Tudor blood did run in her veins – she was descended from Henry VII through her mother Frances' line. But his son, Henry VIII, had a son to follow him, the future Edward VI, as well as two daughters from his previous marriages.

Instead, the Greys hoped that Jane would make a fortuitous marriage match, and they had one eminently eligible bachelor in mind: the would-be Edward VI, who was Jane's cousin. To help make her a desirable bride, Jane was educated in classical and European languages; by all accounts, she was an impressive scholar who loved learning. As well as academia, Jane was brought up in the Protestant faith, a religion she held fast to all her life.

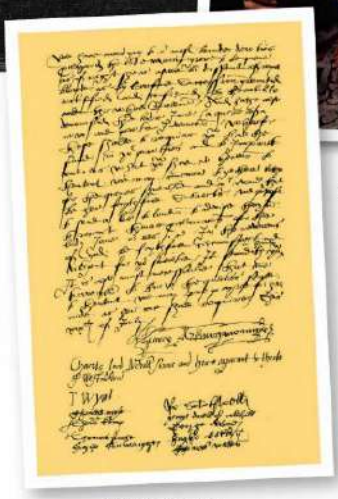
Though the potential match with Edward fell through, another advantageous marriage option presented itself – but the person who stood to gain from the match wasn't Jane. John Dudley, the Duke of Northumberland, was part of the regency council during Edward VI's minority and a hugely powerful man. The cunning politician was eager to expand his influence, and Jane seemed to be the perfect pawn. Edward VI's health was deteriorating, and by June 1553 it was clear the young king was not long for this world. But he was a committed Protestant, and desperate for his crown to pass to a ruler who could continue his programme of religious reforms – which made his oldest half-sister, the fervently Catholic Mary, totally unsuitable.

Dudley helped persuade Edward to select a different heir: Jane Grey. A staunch Protestant, she shared Edward's Tudor blood. And, of course, she had married Dudley's son, Lord



Jane Grey is returned to the Tower of London – this time entering via the 'Traitors' Gate' – after being implicated in Wyatt's Rebellion

At first, Mary I prevaricated over executing Jane – but her hand was forced when the so-called nine-day queen was put at the centre of a plot against her



Mary I, Jane's cousin and daughter of Henry VIII, was viewed by many as the rightful heir – this letter is a proclamation from several gentlemen of Kent denouncing Jane in favour of Mary and calling upon the lords of Sussex to do the same

"Each day Jane sat on England's throne, the whispers calling for Mary to rule multiplied. By the ninth day, they had grown to a roar"

Guildford Dudley, in the spring of 1553 – meaning if she became queen, the Dudley fortunes were set to skyrocket.

Edward's final will, known as 'My Devise for the Succession', wrote both Mary and his other half-sister, Elizabeth, out of the line of succession by effectively declaring them illegitimate. Instead, Lady Jane Grey found herself at the front of the line.

PALACE TO PRISON

Edward died on 6 July 1553, and four days later Jane became England's monarch. Yet even as she was making her way to the Tower of London, where she would be staying until her coronation, her reign was collapsing before it had even officially begun.

Jane's new subjects were deeply unhappy: when her accession was announced in London, the imperial ambassador commented that "no one present showed any sign of rejoicing". The people felt Mary was the true heir to the throne, Edward's will or not – and they were determined to see their rightful queen crowned.

Each day Jane sat on England's throne, the whispers calling for Mary to rule multiplied. By the ninth day, these whispers had grown into a roar, and on 19 July, Mary was declared queen. It was a huge cause of celebration for Londoners, and even Jane's own father was forced to repudiate his daughter and Guildford, and he joined the throngs of people proclaiming Mary the rightful monarch. Jane's mother and her ladies-in-waiting also slunk away; Jane and her husband were left to fend for themselves.

After being stripped of the crown, Jane was held in the Tower of London: in the space of a fortnight, her palace had become her prison. Initially she was treated with leniency – unlike her father-in-law, who was beheaded on 22 August. Far from mourning his execution, Jane proclaimed: "He [Dudley] hath brought me and our stock in most miserable calamity and misery by his exceeding ambition."

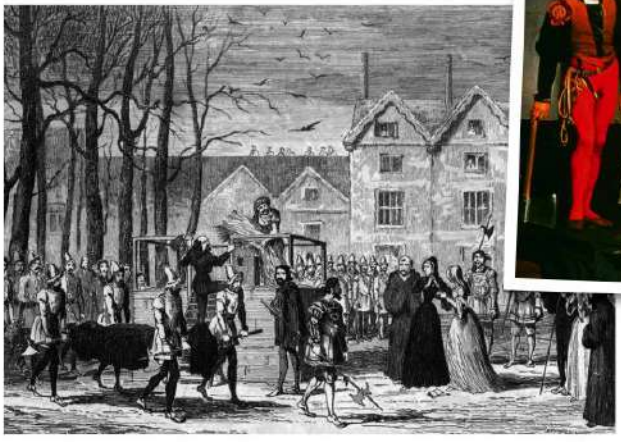
Jane and Guildford's "calamity and misery" continued, as Mary declared the couple should be put on trial for their actions. On 13 November they were transported to Guildhall, where a court packed with Mary's supporters had gathered to decide their fate.

After Jane heard the charges against her, one word left her lips: "Guilty". With this admission, the court found her and Guildford guilty of treason and sentenced them to death. In Jane's case, she would either be "burned, or the head cut off, as it will then please the queen". Two grisly ways to go, but neither, it seemed, pleased Mary: after their return to the Tower, her judgment over the manner of Jane's death still failed to come. She was apparently determined to show her cousin mercy – until Jane was once again connected to a treacherous plot for power.

A PAWN AGAIN

The initial popularity Mary had enjoyed when she was first crowned queen had faded by early 1554, in part due to her plan to marry Philip, Spain's future king – a Catholic who, it was feared, might drag England into fighting costly Spanish wars. Some of Mary's subjects were so against the match that words were no longer enough. They decided to act.

Sir Thomas Wyatt and a few like-minded individuals, including Jane's father Henry Grey, decided to stage an uprising in protest to the marriage. ▶



ABOVE: **Jane panicked when she couldn't find the block at the moment of her execution**

LEFT: **Jane caught sight of her husband's body, a foretelling of her own fate – though in reality she glimpsed this from a window, waiting until the cart returned before being taken to Tower Green herself**

However, in January 1554, word of the plot got out. Grey – who had tried to gather more rebels in the Midlands – was captured the following month and thrown in the Tower.

Jane had played no role in the rebellion, but her father's involvement in it was enough to force Mary's hand. At the urging of her advisors, death by burning and beheading were back on the table.

On 12 February 1554 Jane and her husband were both executed. Guildford had gone first; she had seen his corpse atop a cart that was trundling back to the Tower. Now it was Jane's turn. The 16-year-old stepped onto the scaffold on Tower Green and addressed those who had gathered to watch her head be cleft from her shoulders.

"Good people, I am come hither to die," she said. "I do wash my hands thereof in innocency before the face of God and the face of you good Christian people this day."

After reading a psalm, she accepted the offer of a blindfold and asked the executioner to "despatch her quickly". But as she knelt with her eyes covered, she could not find the executioner's block and apparently cried out: "What shall I do? Where is it?" After someone guided her to it, she calmed herself and placed her head on the blood-stained wood.

Her last words – "Lord, into thy hands I commend my spirit" – rang out as the axe came down. The nine-day queen had met her end.

JULY ANNIVERSARIES

A LOOK BACK AT THREE OTHER EVENTS THAT HAVE TAKEN PLACE IN JULY THROUGHOUT HISTORY

15 July 1799

STEALING TREASURES

During a campaign in Egypt, a Napoleonic soldier finds a black stone slab outside Rosetta, a town close to Alexandria. The slab is nearly two-and-a-half feet wide and almost four feet long, inscribed with Egyptian and Greek characters. It's taken into French possession, and is later seized by the British in 1801.

6 July 1885

A SHOT IN THE ARM

French microbiologist Louis Pasteur successfully administers the first anti-rabies vaccination to a nine-year-old boy named Joseph Meister, who has recently been bitten by a dog infected with the disease. Pasteur has already tested the vaccine on dogs; this is the first time it is used on humans.

13 July 1923

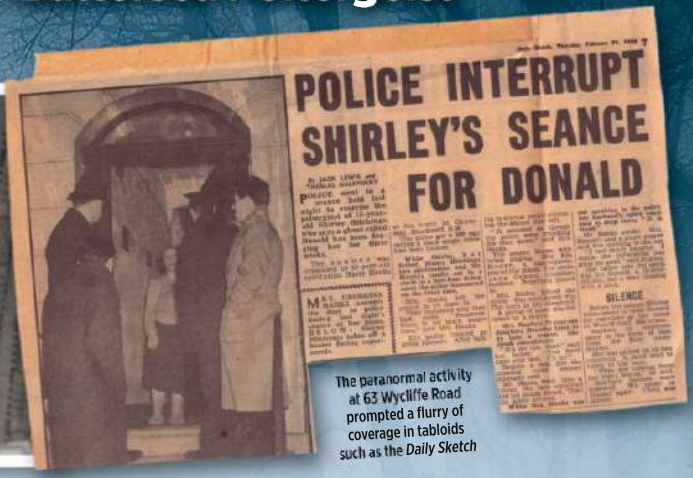
BOOZY BAN

As a result of MP Lady Nancy Astor's campaign to increase the legal drinking age in Britain, a law is passed in the House of Commons that criminalises the sale of alcohol to anyone younger than 18. Dubbed 'Lady Astor's Bill', it is passed by 257 votes to 10.

GETTY IMAGES X5

In his new monthly column, BBC Radio's **Danny Robins** will be scouring the archives in search of real-life ghost stories, starting with the **Battersea Poltergeist**

Shirley Hitchings' teenage life was turned upside down by a poltergeist named 'Donald'



POLICE INTERRUPT SHIRLEY'S SEANCE FOR DONALD

The paranormal activity at 63 Wycliffe Road prompted a flurry of coverage in tabloids such as the *Daily Sketch*

I'm Danny Robins and I don't believe in ghosts... is what I would have confidently told you before I came across this truly strange case. On 27 January 1956, a mysterious old key appeared on the bed of 15-year-old Shirley Hitchings at 63 Wycliffe Road, an ordinary terraced house in Battersea, south London. That night, the house was shaken by noises so loud it felt like an air raid, waking the neighbours. It was the start of an alleged poltergeist haunting that lasted an incredible 12 years – the longest-ever documented case of its kind. Objects flew across rooms, areas of the house were trashed, random fires broke out, writing appeared on walls and Shirley's family even claimed to see her levitating above her bed. The oddest feature of the case, though, was thousands of letters allegedly handwritten by the ghost!

I was introduced to this story in a way that feels worthy of a horror movie in itself. I was shown an old box that had been sitting in a dark, dusty attic for decades. Inside, were the files of Harold Chibbett, a paranormal investigator, friends with the likes of Sir Arthur Conan Doyle and notorious occultist Aleister Crowley. 'Chib' had devoted his life to proving the existence of ghosts, and when he met the Hitchings family in Battersea, he believed he'd finally uncovered the holy grail of hauntings – as did I, when I first sifted through his files and decided to put together a podcast series about the case.

CAUSING A SENSATION

I found it amazing that this story had essentially been forgotten; back in its day it gripped the British public, doing the 1950s equivalent of 'going viral'. Shirley was splashed across the tabloids and even appeared on live television. The peak of the family's fame came after an attempted exorcism of Shirley was raided by police. The resulting scandal found its way into the Houses of Parliament with the home secretary of the day, Major Gwilym Lloyd George, forced to defend the police. It's the only occasion I can find when a poltergeist was debated in Westminster!

I felt sympathy for Shirley as I researched the press coverage. It makes difficult reading for our modern eyes, with salacious, exploitative headlines about her being in love with the poltergeist, who the family had nicknamed 'Donald'. Whatever you believe about the existence of ghosts, it's clear the Hitchings suffered greatly – and if it was a hoax, they certainly didn't benefit from it. Shirley's father, Wally, was even injured in one of the fires.

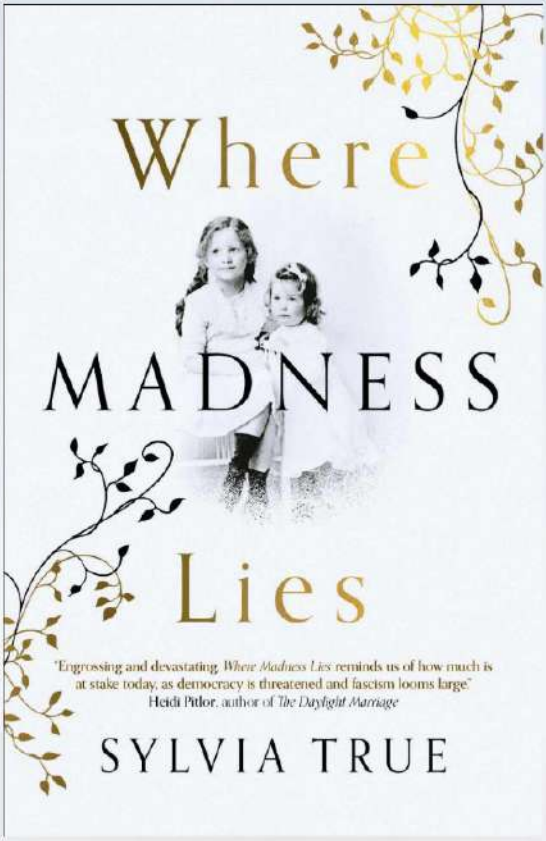
You can hear the full story of this deeply odd case in my BBC Radio 4 podcast series *The Battersea Poltergeist*, for which I met the person whose attic that box of old case files had been sitting in – Shirley herself. She's 80 now, but still razor sharp and highly convincing. The thing that sticks with me most is not something she said, but a little tremor in her voice that sent shivers down my spine – I realised, even 65 years later, Shirley is still scared...

DANNY ROBINS is a writer, broadcaster and journalist. As well as *The Battersea Poltergeist*, he also presents the podcast series *Haunted* on the Panoply Network

LISTEN

BBC RADIO 4 You can stream every episode of *The Battersea Poltergeist* on the BBC Sounds app or by visiting *bbc.co.uk/programmes/p0940193*

FROM THE PERSONAL COLLECTION OF SHIRLEY HITCHINGS X2, WILLIE RUNTE X1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Lies
"Engrossing and devastating, *Where Madness Lies* reminds us of how much is at stake today, as democracy is threatened and fascism looms large."
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SYLVIA TRUE

This is a story about hope and redemption, about what we pass on, both genetically and culturally. It is about the high price of repression, and how one woman, who lost nearly everything, must be willing to reveal the failures of the past in order to save future generations.

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Reviews

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Where Madness Lies is a powerful, heartbreaking novel. *Foreword Reviews*

Sylvia True's novel is a voyage into the madness of madness, tracing the Nazis' seduction of Germany into the moral catastrophe of racial hygiene. Alex Rosenberg *The Girl from Krakow*

Available from wherever books are sold

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The Bloody Code

Words: Emma Slattery Williams

WHAT WAS THE BLOODY CODE?

'Bloody Code' is the term sometimes used to describe the British legal system between the late 17th and early 19th centuries, when more than 200 offences came to carry the death penalty – many of which appear trivial today. The Bloody Code isn't an official name: it was coined some time afterwards in acknowledgment of the justice system's increasingly gruesome nature, though precisely when isn't clear.

WHAT MADE THE BLOODY CODE SO BLOODY?

In 1688, 50 crimes were punishable by death in England and Wales, but over the course of the next century, the list grew considerably – by 1815, there were more than 200 capital offences on the statute books. Many of the new offences related to property, including damage to gardens and cattle, and it was hoped that the severity of the resulting punishments would act as deterrents to further criminal activity and protect landowners' interests. However, you could also be punished if you simply conspired to commit a capital offence or aided in a rescue attempt for those who had been imprisoned for such crimes.

One standout piece of legislation was the Waltham Black Act. In 1723, a number of deer thefts took place in the forest of Waltham Chase in Hampshire, perpetrated by gangs who blackened their faces as a form of disguise. The Waltham Black Act, passed in haste to dissuade similar crimes elsewhere in Britain, allowed anyone found in a forest, royal park or hunting area with a blackened face to be sentenced to death, regardless of whether they had stolen anything.

The implications were multifaceted: beyond concerns over property (the theft of deer), there were rumours that the poachers were Jacobites, supporters of the deposed Stuarts who wished to see them restored to the throne. In other words, as well as being a preventative measure against theft, the act was also designed to target political threats. Many landowners of the period also happened to be MPs, which ensured that it was swiftly passed into law.

"The Waltham Black Act allowed anyone found in a forest with a blackened face to be sentenced to death"

HOW WERE CRIMINALS PUNISHED UNDER THE BLOODY CODE?

With no national police force, deterrence was the main method of preventing crime. Prosecution was largely left in the hands of the victim, who would bring the criminal in front of a local magistrate. Towns did have constables, but they were unpaid and only worked during their spare time.

Public execution by hanging was the preferred method for dispatching felons, with the added benefit that aspiring criminals would hopefully be deterred after witnessing the fate that awaited them if they were caught.

In 1783, 'New Drop' gallows were properly introduced in Britain – these had a platform that fell away underneath the condemned, ensuring a quicker death via a broken neck. Prior to this, a simple gallows was used without a trapdoor; those sentenced to death perished from prolonged strangulation. Gibbeting, a post-mortem punishment where the ▶

ABOVE: **If you look closely, you can see the skull belonging to the last victim left to die in these gibbet irons**

TOP: **A crowd gather at Tyburn, one of London's infamous execution sites, to watch a public hanging**

GETTY IMAGES X2

dead would remain on display as a deterrent to others, was also employed until 1832.

WHAT WERE SOME OF THE CRIMES THAT CARRIED THE DEATH PENALTY?

Capital offences included arson, the cutting down of trees, wrecking a fishpond, destroying turnpike roads and impersonating a Chelsea pensioner.

Between 1735 and 1799, 80 women were also hanged for "murdering their bastard child". While some women were driven to commit the offence due to the stigma of having a baby out of wedlock, in reality, most of the infants had probably been stillborn, or had died shortly after birth due to natural causes.

Children themselves were not exempt from the death penalty. Providing there was strong evidence of "malice" behind their crimes, youths aged 7–14 could also find themselves facing the gallows. The concept of criminal responsibility was not yet recognised, and it wouldn't be until 1908 that executions for those under the age of 16 were finally abolished.

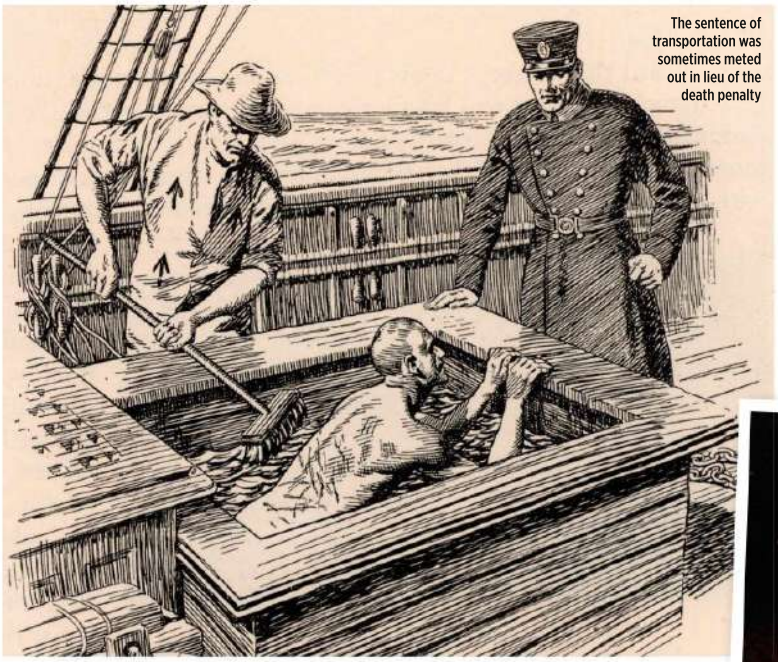
HOW DID JURIES REACT TO THE BLOODY CODE?

In some cases, offenders were offered mercy if they joined the army or navy. But despite the popularity of public executions, many juries were reluctant to pass the death penalty, especially in Scotland and Wales, which had more autonomy over their legal systems.

Sometimes, judges and juries circumvented the legal system to spare people from the gallows. For example, in cases where the theft of goods above a certain value carried the death penalty, the figure might be underestimated on purpose – known as 'pious perjury'. On other occasions, juries might find the accused not guilty, even if the evidence clearly suggested otherwise.

Transportation to the penal colonies in America, Canada, Australia and Van Diemen's Land (today known as Tasmania) was also used as an alternative to capital punishment. Between 1788 and 1868, Australia became home to 162,000 British convicts alone.

> "Juries might find the accused not guilty, even if the evidence clearly suggested otherwise"



The sentence of transportation was sometimes meted out in lieu of the death penalty

WAS THE BLOODY CODE EFFECTIVE AS A CRIME DETERRENT?

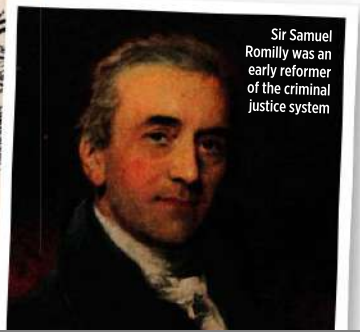
Court records show that far fewer people were executed during the 18th century than during the two preceding centuries – suggesting that either the harsh punishments worked as a deterrent, or that judges were hesitant to pass such severe sentences. Of approximately 35,000 people sentenced to death in England and Wales between 1770–1830, it's thought that only 7,000 executions were actually carried out.

After pickpocketing was downgraded from a capital offence in 1808, the number of prosecutions rose, leading supporters of capital punishment to suggest that more lenient punishments increased the rate of crime.

WERE THERE ANY CRITICS OF THE BLOODY CODE?

Late 18th/early 19th-century lawyer and MP Sir Samuel Romilly was both a vocal opponent of the slave trade and a reformer of the criminal justice system. He successfully lobbied for the abolition of the death penalty for crimes such as pickpocketing and personal theft, and in 1814, he also succeeded in abolishing the practice of hanging, drawing and quartering. Later, MP William Ewart led a campaign to ban the practice of hanging in chains, and removed the death penalty for stealing cattle in 1832.

Victorian writers Charles Dickens and William Makepeace Thackeray were also strong critics of public executions and questioned the effects they had on spectators. Rather than being solemn



Sir Samuel Romilly was an early reformer of the criminal justice system

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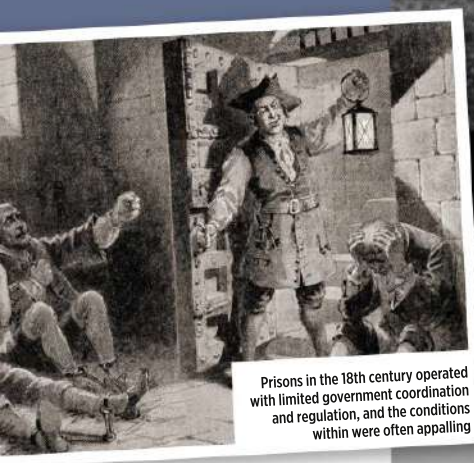

Prisons in the 18th century operated with limited government coordination and regulation, and the conditions within were often appalling

A demonstration against capital punishment at Wandsworth Prison in London, 1959

occasions where the gathered crowds witnessed justice being carried out, the events often turned into raucous affairs that – somewhat ironically – attracted pickpockets and criminal behaviour.

WHAT WERE PRISONS LIKE AT THIS TIME?

Prisons during the 18th century were not necessarily a better alternative to the death penalty – disease was rife, and inmates often found themselves sharing cells with rats. And unlike the prisons of today, there was no separation according to age or the nature of the crime, so petty child thieves could find themselves sleeping next to hardened criminals.

Villages and towns had their own lockups where people would wait to be seen by the local magistrate, while other prisoners could be kept in the dungeons of castles. However, there were a few large prisons such as Newgate in London, which could hold around 300 prisoners. Decommissioned ships known as prison hulks were also used, while those who fell behind on payments could find themselves in debtors' prisons.

Around 25 per cent of inmates died each year during the mid-18th century – a figure that was often higher than the annual execution rate. Conditions inside prisons were not given much thought, as they were run by individual towns rather than by central government, and gaolers were not paid. They would instead take money directly from the prisoners, which meant that many offenders stayed in well beyond the end of their sentences because they were unable to afford their release fees.

The Gaols Act of 1823 finally saw the beginning of prison reforms, including the separation of male and female inmates, the payment of gaolers, frequent visits by doctors, and attempts to rehabilitate prisoners.

WHY WAS THE BLOODY CODE ABOLISHED?

Home Secretary (and future Prime Minister) Sir Robert Peel was a keen supporter of reforming the justice and prison systems. He introduced the Gaols Act of 1823, which removed the death penalty for 130 offences and improved conditions within prisons. In the same year, the Judgment of Death Act also allowed judges to use their own discretion when passing sentences, and gave them the power to commute a death sentence to imprisonment except in cases of murder and treason. By the 1830s, the use of the death penalty for any crime other than murder had become rare.

In 1861, there were just five offences that carried a death sentence: murder, treason, espionage, piracy with violence, and arson in royal dockyards. Seven years later, public executions were abolished, instead being carried out behind prison walls.

ABOVE: **Sir Robert Peel removed the death penalty for 130 offences through the 1823 Gaols Act**

ABOVE RIGHT: **John Christie at the Old Bailey in 1953; the serial killer was found guilty of a crime another man had already been executed for, hastening calls for the abolition of capital punishment**

WHAT REPLACED THE BLOODY CODE?

During the late 19th century, campaigners called for an end to capital punishment on moral grounds, with public sympathy usually at its highest whenever a woman was condemned to death. The conversation was then reignited in 1945 following the election of Clement Attlee's Labour Party, whose ranks included many vocal supporters of the cause.

In 1953, London serial killer John Christie was found guilty of a murder that a young man, Timothy Evans, had previously been hanged for. This, along with other high-profile miscarriages of justice, saw further members of the British public lend their support towards abolition. In 1965, the death penalty was suspended for five years, ultimately becoming permanent in 1969. However, it wasn't until 1998 that capital punishment was officially abolished, with last two crimes being treason and piracy with violence.

WATCH

BBC TWO Learn about the Bloody Code with *The Strange Case of the Law* on BBC Two: *bbc.co.uk/programmes/p0165zjs*

The tragic story behind Sylvia Plath's work

Despite her premature death, Sylvia Plath is regarded as one of the most gifted literary talents of the 20th century. **Nige Tassell** asks what drove the American poet to write about such deep personal pain

"What horrifies me most is the idea of being useless: well-educated, brilliantly promising and fading out into an indifferent middle-age."

The poet, novelist and short-story writer Sylvia Plath was far more than brilliantly promising, but tragically didn't get the opportunity to fade out into indifference, even if she had wanted to. The best-known of the so-called 'confessional poets' – a loose fellowship of writers who drew from deep personal experience for their work and whose number included Robert Lowell and Anne Sexton – Plath took her own life at the shockingly young age of 30.

Born in Boston, Massachusetts in 1932, Plath's talents as a writer revealed themselves at an early age and she became a highly accomplished student after enrolling at Smith College in 1950. However, Plath was plagued by severe depression and undertook electroconvulsive treatment. After one such treatment, she made her first suicide attempt in 1953, taking an overdose in a crawl space underneath her mother's home.

After moving to England on a Fulbright scholarship, Plath met the Yorkshire-born poet Ted Hughes and the couple were married at the end of her first year at Newnham College, Cambridge ("it is as if he is the perfect male counterpart to my own self"). They moved to the US a year later. After a spell teaching back at Smith College, Plath took a job as a secretary at a psychiatric unit, giving her more time to write. In the evenings, she'd attend seminars hosted by Lowell, at which he and Sexton urged Plath to write in a more confessional style.

CHAOS AND CREATION

Nancy Hunter Steiner, a roommate of Plath's at a Harvard summer school, later wrote of the impact of her friend's poetry. "In a sense, she was the victim of an obsessive talent that sent her out into the world to gather sensations and seek wounds that could provide creative inspiration. Having acquired the wounds, she stuck her fingers into them, turning the pain and blood into the lines of highly subjective poetry that both repel and fascinate the reader." Plath herself saw her work as "a way of ordering and reordering the chaos of experience". And married life would be a chaotic experience.

Sylvia Plath pictured with her younger brother, Warren, in 1955. The poet regularly reflected on family life in her writing

By 1960, Plath and Hughes were back in England, settling in London's leafy Primrose Hill. It would prove to be a significant year. In April, Plath gave birth to their daughter Frieda; in October, her first poetry collection, *The Colossus and Other Poems*, was published in the US. It would be the only collection published in Plath's lifetime, but the praise for it was largely posthumous. Indeed, when Plath's semi-autobiographical novel *The Bell Jar* was published a month before her death (under the pseudonym 'Victoria Lucas'), it too was largely greeted with critical indifference.

By then, Plath and Hughes – now also the parents of a son, Nicholas – had moved to rural Devon, letting their London flat to another couple, Assia and David Wevill. In July 1962, shortly after attempting suicide by driving her car into a river, Plath discovered that her husband and Assia Wevill were having an affair. Plath and Hughes separated within a couple of months, with Hughes returning to London.

Despite being left in sole control of two young children, Plath enjoyed a burst of creativity, with recent events offering plenty of inspiration. The bitter winter of 1962–63 was miserable, and Plath and the children returned to London before Christmas. Fewer than two months later, though, a further attempt at taking her life would prove to be her last. She was found dead in the kitchen of the flat, having inhaled carbon monoxide after putting her head in the oven.

"BEAUTY OUT OF SORROW"

With the couple still married at the time of her death, Hughes inherited Plath's estate. He admitted destroying the last volume of her journal, much to the chagrin of Plath's disciples. And it would be more than three decades later, via his poetry collection *Birthday Letters*, that he would finally publicly explore their relationship. One critic described the collection as "an apologist diatribe concealed in honey".

Posthumously awarded the Pulitzer Prize for Poetry in 1982, Plath was also the subject of the 2003 biopic *Sylvia*. The free and easy way that the filmmakers exhumed her story was condemned by Plath's daughter Frieda. In a poem entitled *My Mother*, Frieda wrote:

Now they want to make a film
For anyone lacking the ability
To imagine the body, head in oven,
Orphaning children. Then
It can be rewound
So they can watch her die
Right from the beginning again.

Even in death, there was little peace around Plath's legacy. "Perhaps some day I'll crawl back home, beaten, defeated," she once confided to her journal. "But not as long as I can make stories out of my heartbreak, beauty out of sorrow."

Sylvia Plath never made it home.

ALAMY X5

Sylvia Plath at a typewriter in her native Massachusetts, 1954. Much of the critical praise bestowed upon the poet has only come since her death

"Despite being left in sole control of two young children, Plath enjoyed a burst of creativity, with recent events offering plenty of inspiration"

ABOVE: A 1971 edition of Plath's sole novel, *The Bell Jar* – originally published under a pseudonym

RIGHT: Gwyneth Paltrow and Daniel Craig as Plath and Hughes in the controversial biopic, *Sylvia*

FAR RIGHT: The poet's grave in Heptonstall, West Yorkshire

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YOUR ESSENTIAL GUIDE TO THE TITANIC

The sinking of RMS *Titanic* more than a century ago still fascinates to this day, helped in no small part by the numerous film and television adaptations of the tragedy. At its launch, the ship was the largest man-made moving object in existence and was hailed as the most luxurious way to travel across the Atlantic Ocean, yet its lasting legacy was one of immense trauma and loss.

The story of *Titanic*, from drawing board to disaster, and the individual factors that each contributed to the ship's sinking – from freak weather conditions to errors of judgment – weave an intriguing tale. As do the often heartbreaking stories of the myriad people on board: families emigrating to the US hoping to grab a slice of the American dream, through to some of the world's wealthiest individuals.

Starting over the page with a piece on the epic scale of *Titanic*'s design and construction, and with the help of *Titanic* expert Tim Maltin, we uncover the feats of engineering that launched the world's most luxurious ship, discover what life was like on board, and find out what *really* happened on that tragic night in April 1912.

30 Design and construction
Why was *Titanic* built, how was it achieved, and who designed it?

34 Class experience
What was it like to be a passenger on the world's biggest ship, and how did the first-class experience compare to that in second and third?

36 Sailing in style
Explore the rare photos that depict what life was like aboard *Titanic*

42 Myths of *Titanic*
The sinking has been surrounded by myths ever since it happened: *Titanic* expert Tim Maltin separates the fact from the fiction

46 The ship of dreams?
We take a look at the scale of the ship and some of the fascinating facts about its maiden voyage

48 Passenger stories
From a future Olympian to the architect who went down with his ship, uncover the tales of those who were on board

50 Countdown to disaster
A look at the fateful night when the 'unsinkable' ship was lost forever

56 The aftermath
We explore the inquiries into the sinking and how the world responded to the tragedy

58 Finding *Titanic*
How the wreck was finally discovered in the depths of the Atlantic

TIM MALTIN is an author, presenter and world-leading expert on RMS *Titanic*. He has appeared in many documentaries and written widely on the subject, including *Titanic: A Very Deceiving Night* (Malt House Publishing, 2012)

FROM THE DRAWING BOARD TO THE SEA

RMS *Titanic* would be the jewel in the crown of the White Star Line company, but its construction posed a colossal task for its builders

Before RMS *Titanic* had even left Southampton in April 1912, the ominous signs of tragedy were there. Thousands had gathered at the port to wave off friends and family and catch a glimpse of the record-breaking vessel, then the biggest ship in the world. To the horror of onlookers, *Titanic* was almost immediately met with disaster: as the ship was pulled out of the dock by tugboats and began to get underway, water displacement caused the nearby SS *City of New York* to be drawn towards the new vessel. Quick thinking by Captain Smith and a nearby tugboat managed to prevent a collision and *City of New York* was towed out of harm's way, but a serious accident that could have led to cancellation of the voyage was only very narrowly avoided.

The Edwardian era was a golden age of shipbuilding. Developments in steamships allowed people to cross the oceans more quickly and safely than ever before. Soon, luxurious passenger ships were being built that attracted high-paying clientele, and companies tried to outdo each other with increasingly lavish vessels – no expense was spared.

RULING THE OCEANS

White Star Line was founded in 1869 by English shipowner Thomas Henry Ismay. Initially a cargo haulier, the company soon became one of the most prestigious in the transatlantic passenger trade and, from 1908, began work on three liners: RMS *Olympic*, RMS *Titanic* and RMS *Gigantic*, later renamed *Britannic*. The trio of ships, which comprised White Star Line's Olympic class, were intended to give the company an advantage over its rivals and were noted for their comfort, luxury and reliability rather than speed.

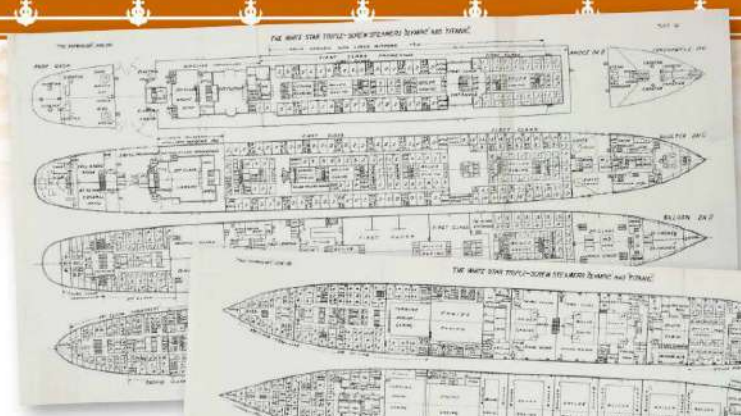
Belfast shipbuilders Harland and Wolff undertook most of the design work for *Titanic*. The team was spearheaded by naval architect Thomas Andrews, aided by deputy naval architect Edward Wilding and chief draughtsman Alexander Carlisle. Andrews had taken over the role of chief architect from Carlisle, who had officially retired in 1910, though he continued to work on the project as a consultant. It was Carlisle who was responsible for *Titanic*'s graceful lines, as well as a – rejected – design to enable *Titanic* to carry double the number of lifeboats.

ABOVE: **Thomas Henry Ismay, founder of the White Star Line company**

TOP LEFT: ***Titanic*** **(*left*) was not the first of its class: *Olympic* (*right*) launched in October 1910**

TOP RIGHT: **A poster advertising *Titanic*'s maiden voyage on 10 April 1912**

GETTY IMAGES X4, ALAMY X5



ABOVE: **Thomas Andrews, chief naval architect of *Titanic***

BOTTOM: ***Titanic* in the dry dock having its interiors and machinery fitted**

BELOW: **Workers leaving the Belfast shipyards, c1911**

"AT 269 METRES LONG, *TITANIC* WAS THE LARGEST MAN-MADE MOVING OBJECT IN THE WORLD, AND EXPECTATIONS WERE HIGH"

Lord Pirrie, who was a director of both Harland and Wolff and White Star Line, was in charge of the whole project. In July 1908, the plans for *Titanic* were formally approved by Joseph Bruce Ismay, White Star Line's chairman and the son of founder Thomas Henry Ismay. *Olympic* and *Titanic* were constructed alongside each other, with work beginning on *Olympic* in December 1908 and on *Titanic* the following March.

A MAMMOTH TASK

Harland and Wolff was considered one of Britain's most prestigious ship builders. But despite boasting the largest shipyard in the world, the firm didn't initially have facilities big enough to build these two mammoth ships, so three slipways were converted into two larger slipways to accommodate the huge vessels. A steel gantry was added, as were cranes and electric lifts. The usual workforce of 6,000 was more than doubled for the construction of both *Titanic* and *Olympic*.

It took 26 months for *Titanic* to be built. First to be constructed was its keel – the backbone and very bottom of the ship. The hull, the watertight steel body, was then built around it. Four 20-metre funnels towered above the vessel and ensured that it dwarfed any other ship. At 269 metres long, *Titanic* was the largest man-made moving object in the world. Expectations were certainly riding high.

ABOVE: **Huge cross braces were used to reinforce the ship's skeleton as it was built**

TOP LEFT: **The plans for the new White Star Line ocean liners, *Titanic* and *Olympic***

Harland and Wolff was one of Belfast's largest employers. Many of the shipyard workers lived with their families in the streets around the docks. Working in a shipyard was tough and dangerous, though, and there were 246 injuries recorded while *Titanic* was being built – including severed limbs, falls from the ship, or legs crushed under steel. There were also eight fatalities during construction, and one worker died on the day of the ship's launch when a wooden support fell on him.

SINKABLE? UNTHINKABLE

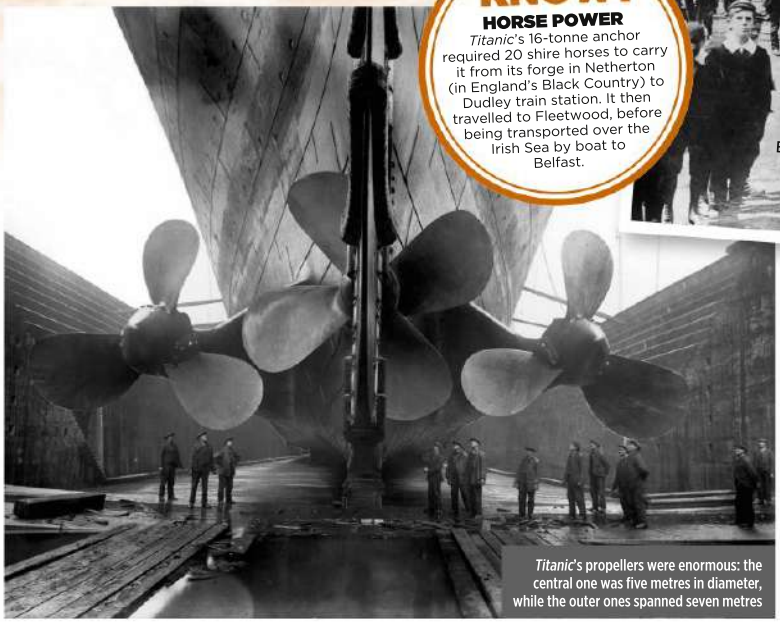
At just after midday on 31 May 1911, *Titanic* was launched in Belfast in front of a crowd of around 100,000 people. Those lucky enough to have tickets watched from the slipway, with many ▶

DID YOU KNOW?

HORSE POWER

Titanic's 16-tonne anchor required 20 shire horses to carry it from its forge in Netherton (in England's Black Country) to Dudley train station. It then travelled to Fleetwood, before being transported over the Irish Sea by boat to Belfast.

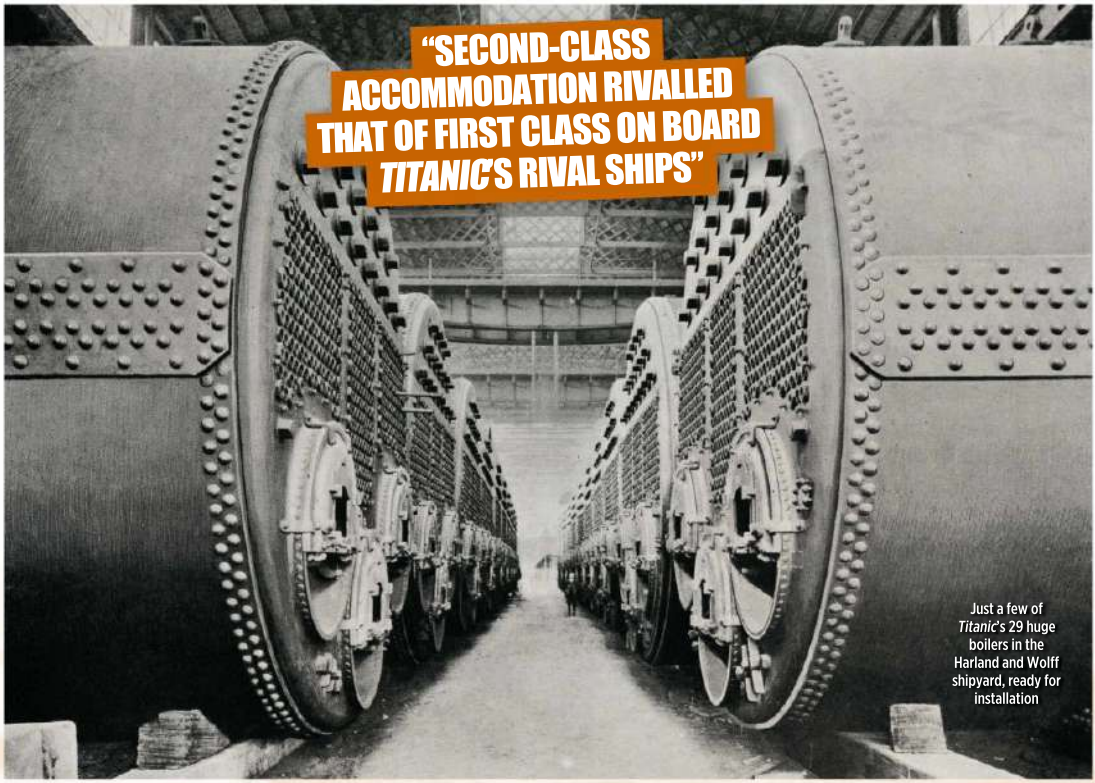
A crowd gathers to watch *Titanic*'s anchor make its way from the Black Country to Belfast



Titanic's propellers were enormous: the central one was five metres in diameter, while the outer ones spanned seven metres

A trio of lifeboats are hoisted on board – a feature passengers hoped would never be required

"SECOND-CLASS ACCOMMODATION RIVALLED THAT OF FIRST CLASS ON BOARD *TITANIC*'S RIVAL SHIPS"



Just a few of *Titanic*'s 29 huge boilers in the Harland and Wolff shipyard, ready for installation

GETTY IMAGES X3, ALAMY X2, NATIONAL MUSEUMS NORTHERN IRELAND X1

more standing on the riverbanks as the ship slid into the River Lagan. *Titanic* was then towed to its fitting-out basin further down the river at Thompson dock, the specially built largest dry dock in the world at that time, where the ship's machinery and interiors were fitted.

Titanic was powered by two nine-metre-tall steam engines, which drove the ship's three propellers: two directly and one via a turbine. The ship's 29 boilers were fed by 159 furnaces, which needed 660 tonnes of coal each day. This allowed *Titanic* to reach a maximum speed of 24 knots (28mph).

Those wealthy enough to travel first class were surrounded by luxury and comfort. No expense was spared, and everything was specially made, from the gilt light fittings to the oak staircases.

Second-class accommodation and facilities rivalled that of first class on board *Titanic*'s rival ships. Even for third-class passengers, the standards would have been better than many of them were used to. The ship boasted 10 decks – eight of which passengers could use. Only the bottom two decks were out of bounds: these were the orlop deck, where cargo was stored, and the tank top, the bowels of the ship and the deck upon which the engines and boiler rooms stood.

White Star Line marketed both *Olympic* and *Titanic* as "practicably unsinkable" – and stated as much in a 1910 publicity brochure. *Titanic*'s hull boasted 16 special watertight compartments, which could be sealed off in case of emergency and prevent water in damaged sections from flooding the rest of the ship. The ship could remain afloat if no more than four of its forward compartments became flooded – but when the collision with the iceberg occurred, the impact caused six compartments to become open to the sea. Many of the bulkheads (walls between the compartments) had watertight doors, which closed automatically in the event of emergency. Moreover, though the bulkheads extended above the waterline, they were not capped at the top – in other words, water could (and did) spill over the top into neighbouring compartments.

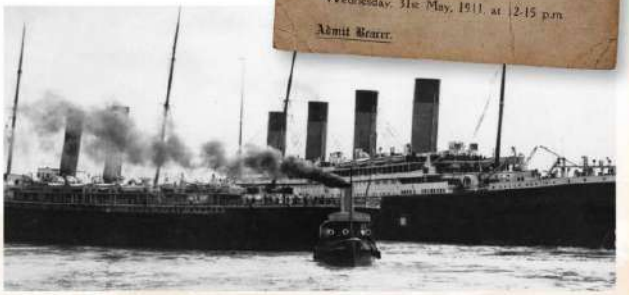
On 3 February 1912, *Titanic* moved to the dry dock, where its huge propellers were added. Following a final coat of paint, *Titanic* was complete. It could hold up to 3,547 passengers and crew and, when full, weighed more than 52,000 tonnes. A number of sea trials were carried out to ensure that the engines were in full working order and to see how the ship performed under different speeds, with a practice emergency stop proving it could be brought to a halt from a speed of 20 knots (23mph) in just over half a mile.

From Belfast, the ship made for Southampton to prepare for its maiden voyage. *Titanic*'s first journey was originally scheduled for 20 March 1912, but was delayed; in September 1911, *Olympic* had been involved in a collision with HMS *Hawke*, which had diverted manpower and resources away from *Titanic*'s construction for *Olympic*'s repairs. Who knows what may have happened if *Titanic* had set off on its original March sailing date, before the ice region had extended so far south?

On 10 April, after a near-miss with *City of New York*, *Titanic* was finally ready to begin its journey to New York. Crowds lined Southampton's dock to wave goodbye to friends and family and catch a glimpse of the magnificent ship. *Titanic* sailed to Cherbourg in France and then Queenstown (now Cobh) in Ireland to pick up more passengers, many of whom hoped to start a new life in America. On 11 April, *Titanic* left Europe behind and sailed into the Atlantic.

WORDS: EMMA SLATTERY WILLIAMS

A ticket for the *Titanic*'s launch from Belfast on 31 May 1911



Titanic and *City of New York* in the moments after their near-disastrous collision

TITANIC IN NUMBERS

159

The number of furnaces that powered *Titanic*'s boilers

176

The number of firemen (stokers) who shovelled coal into the furnaces and kept them going

£1.5m

The cost of building *Titanic*. Today it equates to roughly £120m

£2

The weekly wage for a Harland and Wolff construction worker

22

How many buses could fit in the length of *Titanic*

9

The number of workers killed during the ship's construction and launch

ALL ABOARD

Whether poor, wealthy or somewhere in between, every class of *Titanic* passenger was well catered for when they boarded the vessel in April 1912

WHITE STAR LINE

FIRST-CLASS PASSENGERS

For those who could afford a first-class ticket, travelling on *Titanic* was a luxurious experience. As well as enjoying the finest food, facilities and activities on offer, you'd be rubbing shoulders with the elite – millionaires, aristocrats and sports stars were all on the first-class passenger list.

The hefty ticket price secured passengers the glitziest treatment. A team of elite chefs prepared banquets of exquisite cuisine: for breakfast on 11 April, there was a gargantuan feast including sirloin steak, smoked salmon, freshly baked soda and sultana scones, grilled ham and sausages, fresh herrings and watercress (which was lauded as a health food at the time), among others. With such a variety of food on offer, it's no wonder many passengers would eat at least three courses during their morning meal.

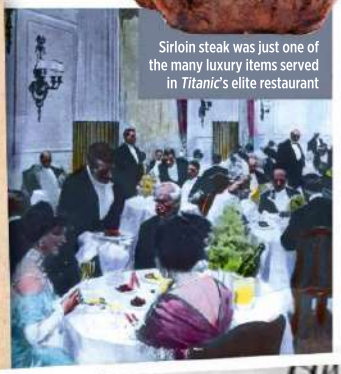
The whole experience of eating on *Titanic* was designed to be an opulent affair. First-class passengers could dine in the ship's exclusive restaurant, modelled on the finest European eateries of the period. Or, if they fancied something more intimate, food was brought directly to their suites. Unusually for the time, breakfasts could be taken in first-class cabins – they were brought in covered dishes by *Titanic*'s stewards, and hot water jackets kept the food warm.

As well as excellent dining amenities, *Titanic* offered a huge range of activities to its highest-paying guests. Those who wished to exercise could take a dip in the heated pool, head to the squash court or, for the price of a shilling, "indulge in the action of horse riding, cycling [and] boat rowing" in the ship's gymnasium, which was kitted out with an electric horse, electric camel, a rowing machine and several stationary bikes.

After working up a sweat, guests could relax in the Turkish baths, which boasted a steam room, as well as electric beds that applied heat to the body via electric lamps. On the promenade deck they could try their hand at games including deck quoits, or listen to the live orchestra, which performed around the ship. Men also had use of a first-class smoking room, whereas women were encouraged to use the reading and writing room. This had a large window overlooking the promenade deck; both rooms featured a real fire crackling in the grate.

Despite all the creature comforts on offer, some passengers decided to bring a piece of home on board: their beloved pets. At least 12 dogs sailed on *Titanic*, mostly belonging to first-class American passengers. A kennel was provided for them to stay in (although some travellers kept their dogs in their rooms), and they were apparently taken for daily walks on the 'dog deck' – an upper deck close to one of the ship's funnels.

One car was also brought aboard: a 1912 Renault Coupé de Ville (like the example, shown right) that was the property of William Carter, a wealthy American passenger. It was kept in one of *Titanic*'s cargo areas and was lost with the ship.



Sirloin steak was just one of the many luxury items served in *Titanic*'s elite restaurant

At least 12 prized pooches are known to have boarded the vessel with their owners

A preserved 1912 Renault Coupé de Ville – a vehicle of the same model sank with the ship

GETTY IMAGES X6, ALAMY X3

WHITE STAR LINE

SECOND-CLASS PASSENGERS

Second-class travel was still a relatively new phenomenon, and was tied to the growth of the new middle classes who felt themselves above steerage but couldn't afford a first-class ticket. These passengers included affluent office workers, such as lawyers, members of the clergy, and some servants of first-class passengers, like nannies and drivers. However, for those travelling second class on *Titanic*, their experience was said to be as decadent as sailing first-class on many other liners.

For instance, the food on *Titanic* for second-class passengers was prepared in the same expansive kitchens and bakeries that served first-class diners. And although their menus weren't quite as luxurious, they still ate fare that was as high-quality as the food served in many of the best regional hotels. Second-class breakfasts had plenty of the same staples as first class, such as boiled hominy (a type of porridge made from corn, condensed milk and vanilla), fried potatoes, and buckwheat cakes (similar to crepes and typically drizzled with maple syrup).

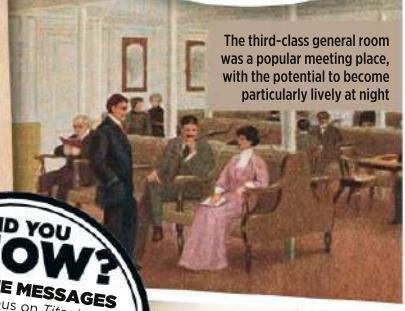
The second-class dining saloon, which had a pianist who provided a musical backdrop to meals, boasted the same bone china crockery and silver-plate cutlery as first class, too, although there were fewer pieces of tableware on offer. For instance, whereas first-class passengers could use grape scissors, second-class travellers made do with plucking individual grapes from the bunch with their fingers.

In terms of activities, second-class travellers had exclusive use of what White Star Line deemed the "unusually spacious" boat deck. This deck had a promenade where guests could walk and chat with fellow passengers, as well as relax on large steamer chairs and sip hot drinks.

To break up the day, passengers could take afternoon tea and coffee either on the boat deck, or in the second-class library. After the evening meal, second-class passengers split off into their sexes (this was common in first class, too, as men and women of the era were expected to enjoy different pursuits). Women would typically retire to the library, settling into one of the mahogany chairs and perhaps chatting with fellow guests or taking in the night-time views through the large, silk-framed windows.

Conversely, men could while away the evenings in the smoking room, imbibing a drink or trying their luck at cards. This room was designed to exude masculinity – from its oak-panelled walls, to the dark green leather chairs grouped around gaming tables.

Simple games such as shuffleboard – enjoyed here on another liner in the early 1900s – were played on *Titanic*



The third-class general room was a popular meeting place, with the potential to become particularly lively at night

DID YOU KNOW?

MEALTIME MESSAGES

The daily menus on *Titanic* were printed on small slips of card that could also function as postcards. There was sufficient space on the reverse for passengers to dash off short messages and send the menus to loved ones at home as mementos of their journey.

Steerage passengers slept on bunks like those shown here – but it was still a more comfortable experience than third class on other ships

WHITE STAR LINE

THIRD-CLASS PASSENGERS

More than 700 people travelled on *Titanic* in third class, the majority of them emigrants looking to settle in America. Many hailed from western Europe, but there were also lots of Jewish passengers from eastern Europe, as well as people from Lebanon.

While food and facilities were decidedly spartan compared to those found in first and second class, people in steerage still enjoyed a far better degree of luxury and comfort on *Titanic* than they would have experienced at home, or on any smaller ship. White Star Line was very concerned with the comfort of their lowest-paying passengers, saying "only the best supplies... find their way on these steamers". Most other liners didn't provide food for third-class passengers at all, insisting they had to bring their own provisions on board.

Breakfast typically involved eggs, oatmeal, bread, meat and fish, but the biggest meal of the day in third class was dinner, served at noon (for the other classes, lunch was a lighter affair). A large spread was available, often including soups, roast beef, curry and desserts such as plum pudding and ice cream. Supper, the fourth and final meal of the day, was more frugal, with only gruel, biscuits and cheese on offer.

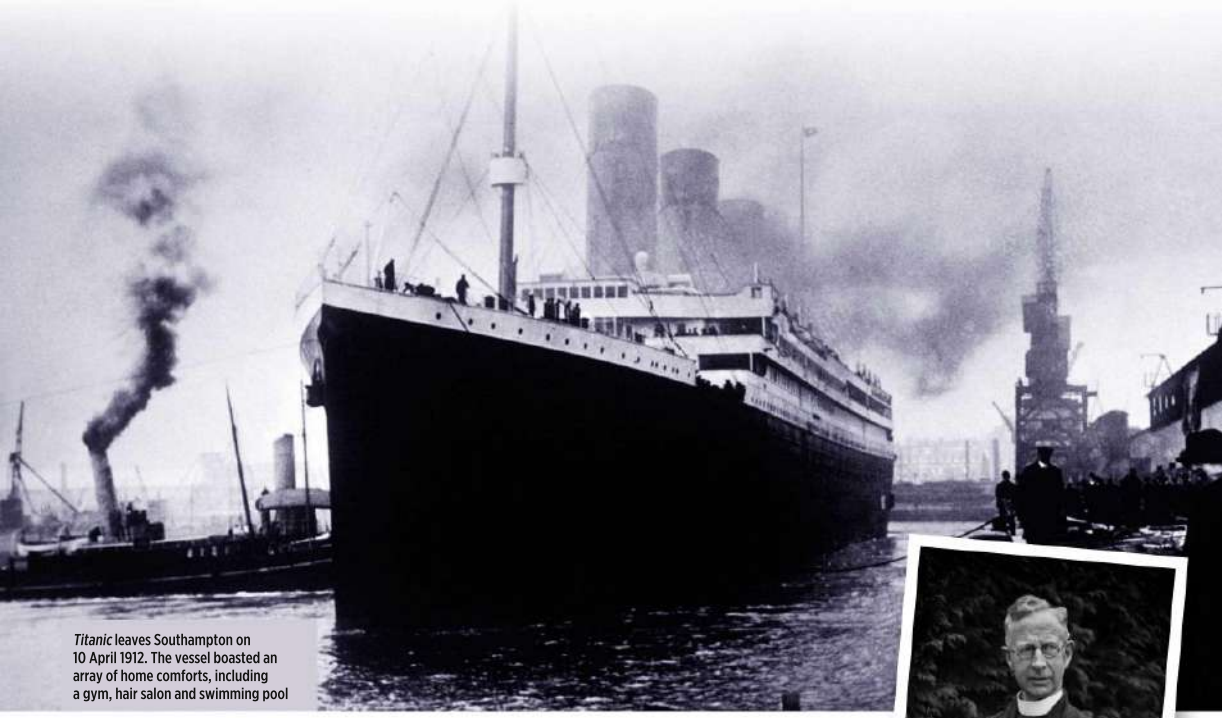
White Star Line was also aware of the unique dietary needs of some of its passengers. For Jewish travellers, kosher food was served in special dishes; tableware was also labelled "MEAT" or "MILK" in English and Hebrew.

Few planned activities were on offer for steerage passengers, but the poop deck and the general room both proved popular meeting places (third-class passengers were not permitted to access the boat deck). On the poop deck, passengers could relax in the fresh air, though they had to navigate past the cranes also positioned there. Meanwhile, in the general room, which was described by White Star Line as "one of the liveliest rooms on the ship", there was a piano that passengers played long into the nights. Men could also retreat to a third-class smoking room, which had its own bar and spittoons that anyone chewing tobacco could make use of.

WORDS: RHIANNON DAVIES

SAILING IN STYLE

Titanic was supposed to be the epitome of luxury travel, offering passengers experiences never before seen at sea



Titanic leaves Southampton on 10 April 1912. The vessel boasted an array of home comforts, including a gym, hair salon and swimming pool

▲ Amateur photographer and Jesuit priest Father Francis Browne captured some of the only images of *Titanic*'s maiden voyage

GETTY IMAGES X3, ALAMY X1, FR FM BROWNE COLLECTION X1

When the enormous RMS *Titanic* steamed out of Southampton in 1912 to a fanfare of cheers and goodbyes, few people would have believed that its first journey would also be its last.

A floating microcosm of Edwardian society, the ship transported men, women and children of all social classes – from the super-rich, to the struggling poor. Perhaps surprisingly, given its reputation as the world's largest man-made moving object, few official images remain of *Titanic*'s much-vaunted luxury interiors. Its sister ship, *Olympic*, had beaten *Titanic* to launch by just over seven months, and had been much photographed. But with virtually identical fixtures and fittings, and an expected long service ahead of it, there seemed little point in capturing *Titanic*'s grandeur.

A TWIST OF FATE

The rare few images that do survive of the doomed ship were mostly taken by the amateur photographer and Irish Jesuit priest Father Francis Browne, who documented the first stage of *Titanic*'s maiden voyage from Southampton to Queenstown (now Cobh), via Cherbourg. His remarkable images offer a unique window into life on board *Titanic*.

As with much of the ship's tragic story, Father Browne's own survival is down to luck or perhaps, given his vocation, divine intervention. Travelling first class on a ticket purchased as a present by his uncle, Browne befriended a wealthy American couple on board, who offered to pay for him to continue the voyage on to New York City.

No doubt excited by the prospect of transatlantic travel and eager to make the most of the once-in-a-lifetime experience, Browne sent a hopeful telegram to his Jesuit superior requesting permission to remain on board when the ship departed from Ireland. The terse reply he received in return – "GET OFF THAT SHIP – PROVINCIAL" – most likely saved his life. Many of his fellow passengers would not be so lucky.

DID YOU KNOW?

GETTING A LIFT

For first-class passengers who wanted a less energetic way to move through the ship, three electric elevators were provided, complete with lift attendants and comfortable sofas. A fourth electric lift was available for second-class passengers.

GRAND ENTRANCE

Titanic's grand staircase – like that of its sister ship *Olympic*, pictured here – was described by the White Star Line as "the finest piece of workmanship of its kind afloat". Its wide, sweeping steps rose majestically through its decks, allowing first-class passengers to make a grand entrance from the promenade deck into the dining room below. No known photos of *Titanic*'s grand staircase exist today, but we know it was crowned by a huge dome of ornate wrought ironwork and glass that was artificially lit at night.

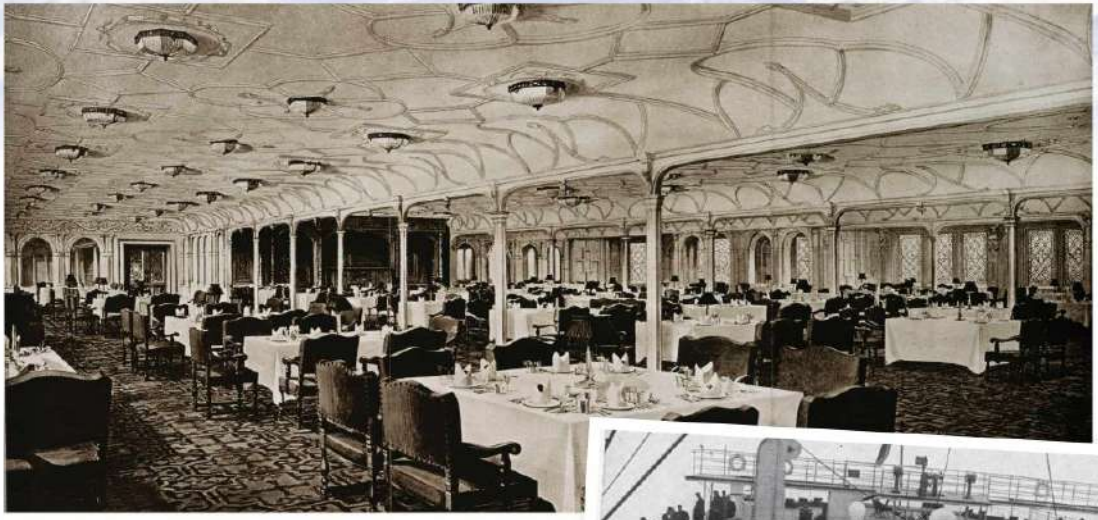
"A STAY IN THE DELUXE PARLOUR SUITE WOULD HAVE SET YOU BACK MORE THAN £85,000 IN MODERN MONEY"

FUN AND GAMES

▲ Six-year-old Robert Speddon plays with his father on *Titanic*'s saloon deck. Robert, his parents and nurse were travelling home first class after a European holiday. The entire family boarded lifeboat 3 after the collision and were eventually rescued by *Carpathia*.

PRIVATE PARADISE

▶ The most enviable rooms on *Titanic* were the ship's four deluxe parlour suites, of which two boasted 50-foot private promenade decks (*pictured*). With two large bedrooms, a bathroom, lavatory and sitting room, a stay in this suite would have set you back more than £85,000 in modern money.



FINE DINING

▲ Decorated with white, wooden panelling and able to seat 554 diners, meals in the first-class dining saloon were a fancy affair. Dinner, served in the evening, was an elegant, formal occasion and was announced by the ship's bugler, Peter W Fletcher, who played 'The Roast Beef of Old England'.

FINAL MOMENTS

▲ The poop deck ('poop' coming from the Latin word *puppis*, meaning the stern of a ship) served as an unofficial promenade deck for third-class passengers and housed two of the ship's eight cargo cranes (at the bottom of the image). The poop deck was the last part of the ship to sink and hundreds flocked there to delay the icy inevitable.

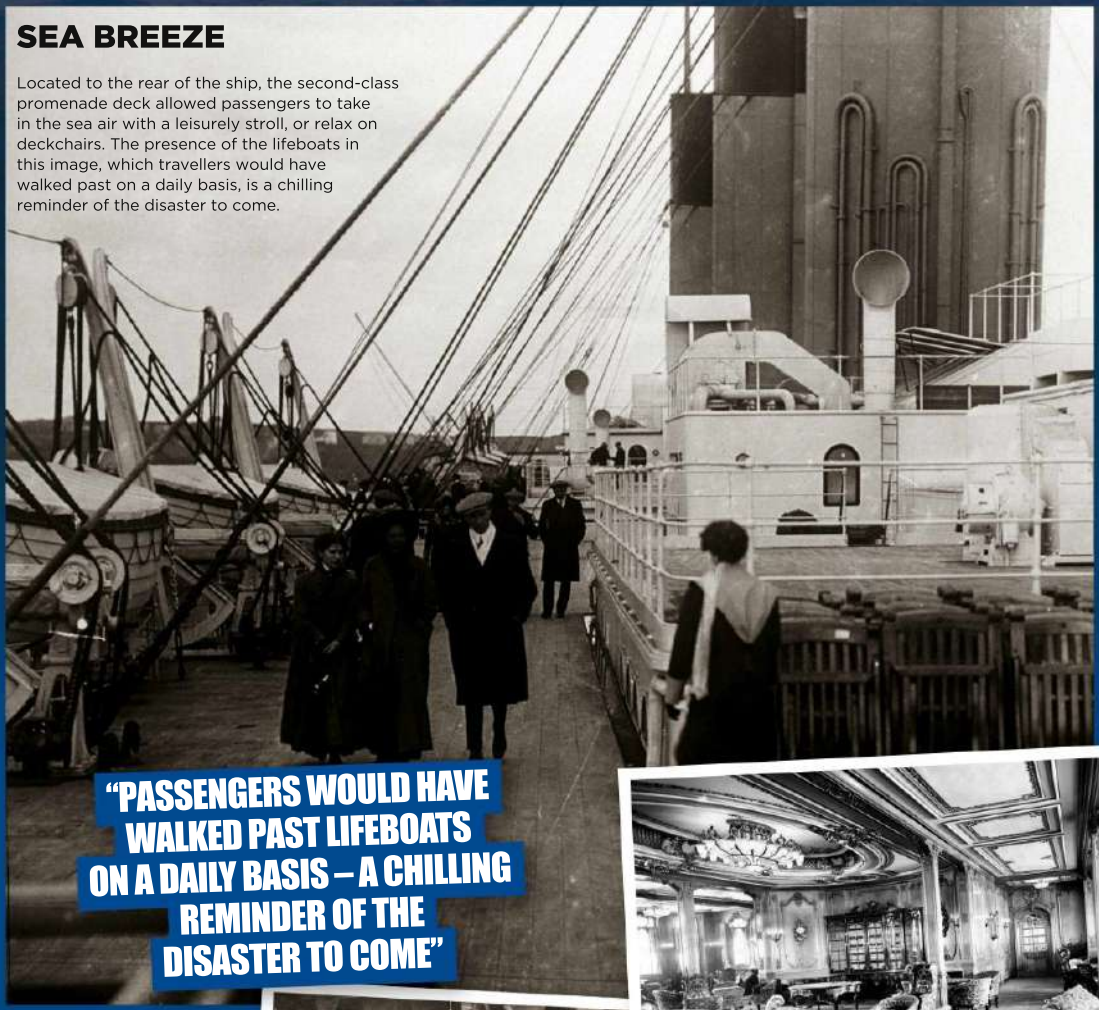
TAKING TEA

◀ Encompassing the width of the ship and furnished with comfortable wicker chairs and Chesterfield sofas, the first-class reception room was a popular place to take afternoon tea. Served between 4–5pm, passengers could catch up with the news of the day while the ship's band (a violinist – possibly Wallace Hartley – can be seen in the far left of the image) entertained them.

GETTY IMAGES X4, ALAMY X1, BRIDGEMAN X1

SEA BREEZE

Located to the rear of the ship, the second-class promenade deck allowed passengers to take in the sea air with a leisurely stroll, or relax on deckchairs. The presence of the lifeboats in this image, which travellers would have walked past on a daily basis, is a chilling reminder of the disaster to come.



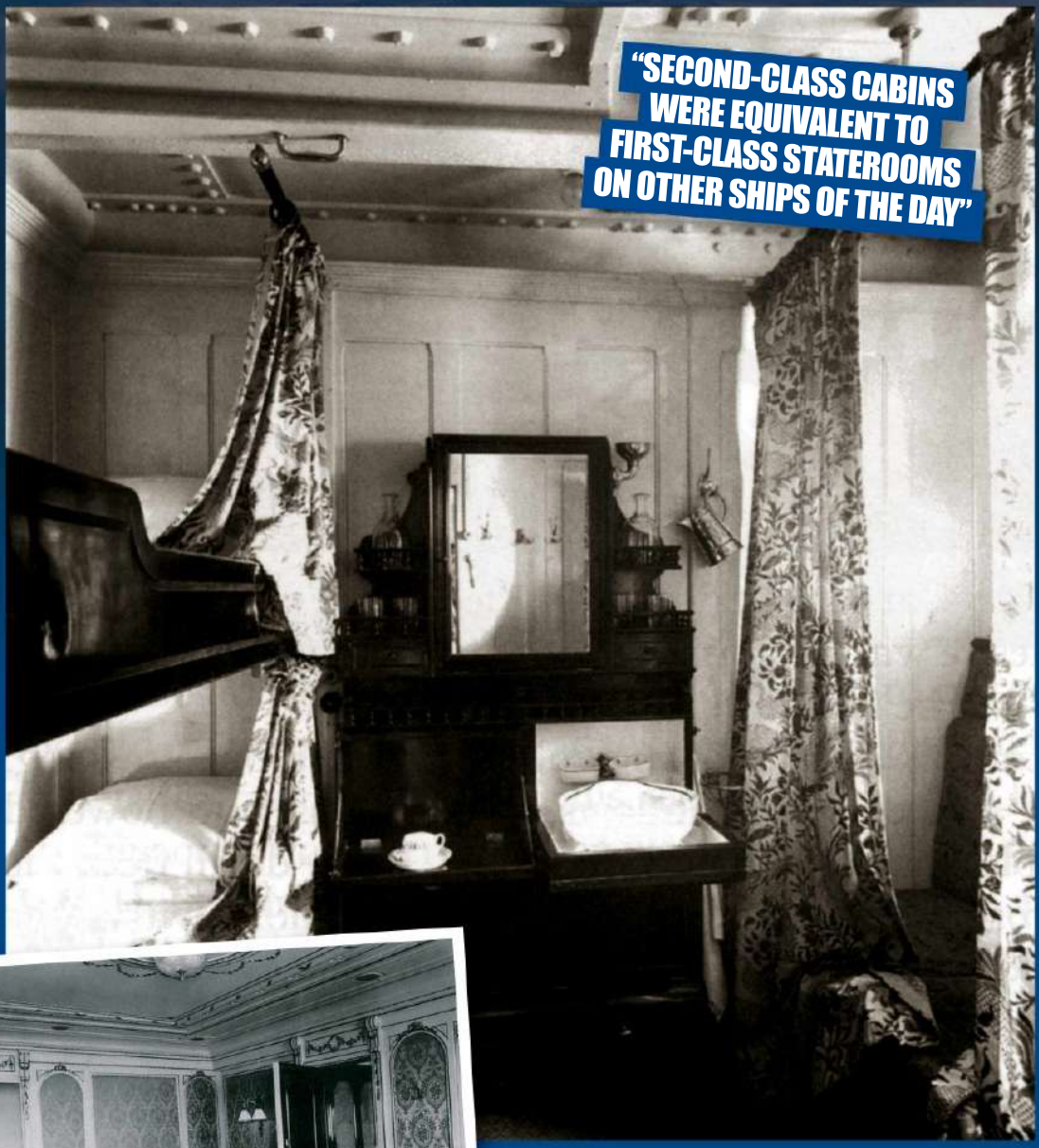
"PASSENGERS WOULD HAVE WALKED PAST LIFEBOATS ON A DAILY BASIS – A CHILLING REMINDER OF THE DISASTER TO COME"

FIT FOR A QUEEN

▲ The first-class lounge, inspired by the Palace of Versailles, was primarily used for socialising, games and light refreshments. One of the most ornate rooms on the ship, it was popular with female passengers who relaxed on sofas and armchairs upholstered in plush velvet. ▶

HAIR RAISING

▶ *Titanic* boasted separate barbershops for first and second-class passengers similar to that of its sister ship *Olympic* (*shown here*). For first-class passengers who wanted to smarten up their appearance, barber Augustus Weikman was on hand, offering shampooing, shaving and hairdressing services for a shilling. White Star Line souvenirs such as dolls, penknives, postcards and trinkets could also be purchased.



"SECOND-CLASS CABINS WERE EQUIVALENT TO FIRST-CLASS STATEROOMS ON OTHER SHIPS OF THE DAY"

SILENT NIGHT

◀ First-class parlour suites like this one could only be afforded by the wealthiest on board *Titanic*. Suite B38 (*pictured*) was occupied by Major Archibald Willingham Butt, an influential military aide to US presidents Taft and Roosevelt.

LIGHTS OUT

▲ Second-class cabins were a step down from their luxurious counterparts, but still equivalent to first-class staterooms on other ships of the day. Washing facilities were communal, but cabins had bunkbeds, a wash-stand, desk and sofa.

KEEPING FIT

▲ 'Physical educator' TW McCawley (*pictured in white*) oversaw *Titanic*'s state of the art gymnasium. As the ship sank, McCawley – who was later described as "a spry little man in white flannels" – refused a lifebelt, fearing it would hinder his swimming ability. His body was never recovered.

ON YOUR BIKE

▼ For just one shilling, *Titanic*'s first-class passengers could "obtain beneficial exercise" in the ship's gymnasium. As well as rowing machines and stationary bikes, passengers could also hone their equine skills on electric horses, which provided an "elegant motion for cantering, trotting or galloping".

DID YOU KNOW?

TAKING IT EASY

Titanic offered a host of leisure activities for first-class travellers, including a 30-foot-long squash court, with spectators' gallery. For the price of four shillings, passengers could visit the Turkish baths, complete with heated blankets and service waiters.

KEEPING *TITANIC* AFLOAT

Hundreds of men and women worked tirelessly behind the scenes to keep passengers happy

To work on *Titanic*, the largest and most luxurious ship in the world at the time, must have seemed like a dream come true. As a 'hotel on water' *Titanic* would have required men and women to fill a huge variety of roles on board – from restaurant staff and deck crew, to engineers, musicians, postal clerks and fire stokers.

Although Captain Smith's cabin boasted its own bathtub and officers enjoyed a smoking room, pantry and sanitary facilities, most of the crew were crammed into rooms along a corridor on E deck. Nicknamed Scotland Road (after a major thoroughfare in the northern part of Liverpool, from where many of the crew hailed) the corridor ran the entire length of the ship, allowing the crew to move around the vessel out of sight of passengers. Off the corridor, rooms dubbed 'glory holes' held stacks of bunks for sleeping. The 23 female crew members, who were all stewardesses, fared better, and were berthed in two-person cabins in the first and second-class areas of the ship.

Tragically few crew members survived the sinking. Of the 908 crew on board, only 212 survived.

DIVING IN

▲ Filled with heated sea water, *Titanic*'s six-foot deep swimming pool was only the second of its kind anywhere at sea. For the price of a shilling, first-class passengers (although not children) could enjoy a refreshing dip, with a swimming costume included in the price.

WORDS: CHARLOTTE HODGMAN

GETTY IMAGES X2, ALAMY X4

TRUTH OR MYTH?

Since its sinking in 1912, dozens of myths and conspiracy theories have circulated about *Titanic* – from the actions of crew and passengers, to how the tragedy could have been avoided. *Titanic* expert **Tim Maltin** separates fact from fiction

ABOVE: Stewards prevent third-class passengers rushing to the boat deck in the 1958 film *A Night to Remember*

RIGHT: The Goodwin family chose to face death together rather than leave male family members behind

THIRD-CLASS PASSENGERS WERE PREVENTED FROM BOARDING LIFEBOATS

FALSE

Several films of the disaster – including the 1958 film *A Night to Remember* and the 1997 blockbuster *Titanic* – famously depict stewards locking third-class passengers below deck to stop them rushing to the lifeboats. But were those travelling in steerage really prevented from leaving the ship?

"This is one of many myths about *Titanic* that is simply not true," explains Tim Maltin, author of several books on the sinking. "First and second-class stewards were actually sent to help third-class stewards direct steerage passengers to the boat deck from around midnight – and *Titanic* didn't sink until 2.20am. There are several reasons why around three-quarters of those travelling third class (an estimated 537 of roughly 709 people) tragically died. One of these is that first and second-class passengers had better access to the lifeboats simply because they were physically nearer to them. There were no lifeboats on the third-class deck, so steerage passengers had to make their way up to the boat deck, and they did get assistance with that.

"But the main reason why so many third-class travellers drowned," continues Maltin, "is because so many families were emigrating to America, often with lots of children. In 1912, boys were technically classed as adults from the age of 13 and would therefore have had to wait to board a lifeboat, after women and children. Many mothers would not have wanted to part from their 13-year-old sons and leave them on board a doomed ship while they set off in a lifeboat, so many third-class families chose to stay together. Frederick and Augusta Goodwin, for example, boarded *Titanic* in Southampton with their six children – two of whom were boys aged 13 and 14. Like so many families with teenage boys, the entire family (*pictured above*) was lost in the sinking."

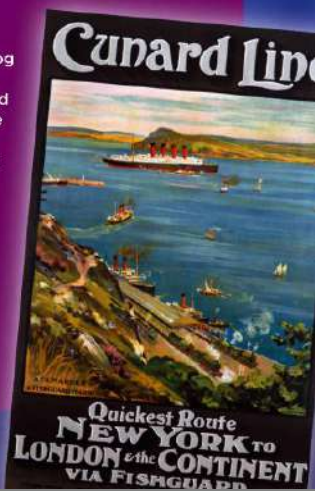
TITANIC WAS RACING TO BREAK A TRANSATLANTIC SPEED RECORD

FALSE

"*Titanic* was never built for speed; it was built for safety, luxury and comfort," comments Maltin. "White Star Line knew that, in terms of speed, its ships could never beat some of those built by the rival Cunard Line, such as RMS *Lusitania*, RMS *Mauretania*, and, later, RMS *Aquitania*. But what White Star Line was really known for was reliability and comfort. *Titanic*'s maximum cruising speed was about 22.5 knots – about 2.5 knots slower than its Cunard rivals – but it did hit 24 knots on its journey from Belfast to Southampton, so it could go pretty fast."

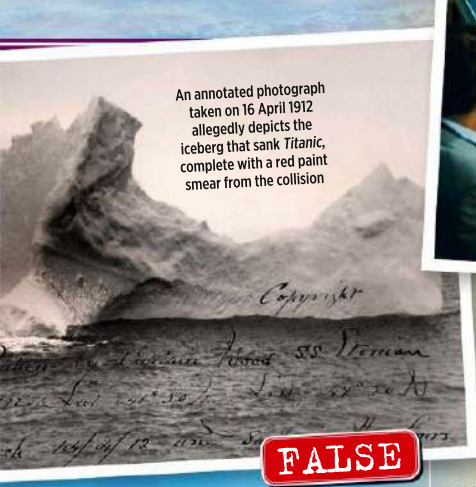
Although not trying to break the transatlantic speed record, *Titanic* was trying to beat the speed set on *Olympic*'s maiden voyage, a feat Maltin believes most people on board would have approved of: passengers, Captain Smith and White Star Line managing director and chairman J Bruce Ismay. To arrive in New York a day early, before the city awoke, would have made headlines, which, particularly for the second ship of a trio, would have been great publicity.

"I don't believe that those making the decisions on *Titanic* were taking risks for publicity reasons, though," says Maltin. "The main danger at sea in 1912 was fog, and the combination of ice and fog would have seen *Titanic* forced to reduce its speed hugely. In some ways, the speed at which *Titanic* was travelling when it hit the iceberg (22 knots) was actually for safety reasons – they wanted to get clear of the ice region while the air was crystal clear and before the fog came down."



Cunard Line was known for the speed of its ocean liners, but White Star Line was all about luxury

GETTY IMAGES X2, ALAMY X4



An annotated photograph taken on 16 April 1912 allegedly depicts the iceberg that sank *Titanic*, complete with a red paint smear from the collision

FALSE

TITANIC WAS CUTTING CORNERS TO REACH NEW YORK AND SHOULD HAVE TAKEN THE LONGER ROUTE

One theory as to why *Titanic* encountered ice is that the ship was travelling too far north in a bid to reach New York early. Not so, says Maltin.

"*Titanic*'s wreck was found six miles south of its planned path to New York – a route well-travelled by other transatlantic liners of the day. Taking into account the length of time the ship took to sink (2.5 hours) and the 1-knot southerly current, the ship was actually only sailing about three miles south of the track it should have been on when it struck the iceberg.

"What many people don't know is that, on the night *Titanic* sank, there was a 75-mile-long piece of unbroken ice, three miles wide, completely blocking the path to New York; *Titanic* sank about seven minutes' steaming time away from that. When *Carpathia* arrived on the scene the next morning, its crew saw ice all around them – they counted about 25 icebergs, many of which were as high as 200 feet tall."

Conditions that year were unusual for that region of the Atlantic, which only increased the dangers, says Maltin. "The Sun and Moon were aligned, which had created a very, very high tide, and that high tide had re-floated all the ice that was grounded along the coast of Newfoundland. This meant there was more meltwater in the Labrador current, and that in turn had taken the freezing field ice further south than normal. What's more, the very cold water the ship was travelling through created a slight haze all around the horizon, despite the otherwise clear night. It was caused by light refracting abnormally in the very cold air, and that refraction haze on the horizon caused *Titanic*'s lookouts to spot the iceberg slightly later than they otherwise would have done, sealing *Titanic*'s fate."

FALSE

THE SHIP'S BAND PLAYED UNTIL THE BITTER END

Titanic's eight musicians famously – and bravely – assembled in the first-class lounge to entertain and calm passengers as they waited to board lifeboats. But were they really playing as the ship became engulfed in water?

"Once the last lifeboats had launched, the band did stop," says Maltin, "and there was no music as the ship sank beneath the waves. *Titanic* actually stayed afloat for about 30 minutes after the last lifeboats were lowered, and the musicians were eventually forced to strap their instruments to their backs and jump into the icy ocean. None of them survived, but some of their bodies were later recovered, including that of band leader Wallace Hartley."

INSET: *Titanic*'s band plays on as water rushes towards them in the 1997 film of the same name

MAIN: Band leader Wallace Hartley's violin – given to him as an engagement gift by his fiancée, Maria – spent 10 days underwater before being retrieved

"THE MUSICIANS WERE EVENTUALLY FORCED TO STRAP THEIR INSTRUMENTS TO THEIR BACKS AND JUMP INTO THE ICY OCEAN"

Despite rumours to the contrary, Captain Smith – depicted getting into the party spirit in *A Night to Remember* – never drank at sea

CAPTAIN SMITH WAS DRUNK AT THE TIME OF THE COLLISION

FALSE

Edward J Smith, White Star Line's most senior captain, has often been placed under the spotlight of blame for the *Titanic* disaster, despite being essentially exonerated by the British and US official inquiries. One accusation levied against the captain, who was not on watch when the ship collided with the iceberg, was that he had been drinking alcohol.

"Captain Smith had attended a dinner party hosted by first-class passengers – the Wideners – but he never, ever drank at sea and this occasion was no different," comments Maltin. "Mrs Widener's sworn affidavit at the US inquiry confirmed that Smith 'drank absolutely no wine or intoxicating liquor of any kind whatever at the dinner'."

Smith left the party at around 8.45pm and, despite not being on watch, headed up to the bridge and remained in that area until the collision at 11.40pm. "Knowing that the ship was entering an ice region and being aware of the associated dangers, it's not surprising that Smith chose to supervise the ship's navigation," says Maltin. "Smith, his officers and crew were all highly experienced and very skilled seamen; they were just caught out by freak weather conditions in the ice field, as well as the way in which the ship struck the iceberg. If *Titanic* had struck the iceberg head-on, which would likely have crumpled the first two watertight compartments, it would possibly have remained afloat."

"A SWORN AFFIDAVIT CONFIRMED THAT CAPTAIN SMITH DRANK NO WINE OR INTOXICATING LIQUOR AT DINNER"

MAIN: The oval – rather than circular – shape of the holes in this piece of salvaged hull shows how the rivets were pulled apart as the ship sank

BELOW: One of the many rivets that held *Titanic*'s steel plates in place

GETTY IMAGES X3, ALAMY X4

WHITE STAR LINE CUT COSTS IN *TITANIC*'S CONSTRUCTION AND USED INFERIOR MATERIALS

FALSE

"When dispelling this common myth, we need only to look at the close relationship between *Titanic*'s builders, Harland and Wolff, and the White Star Line," says Maltin. "Far from being encouraged to cut corners, Harland and Wolff were actually paid according to what they spent on building the ship, with an additional five per cent paid on top of that. So, the more they spent building *Titanic*, the more profit they made. There was no incentive whatsoever for them to save money.

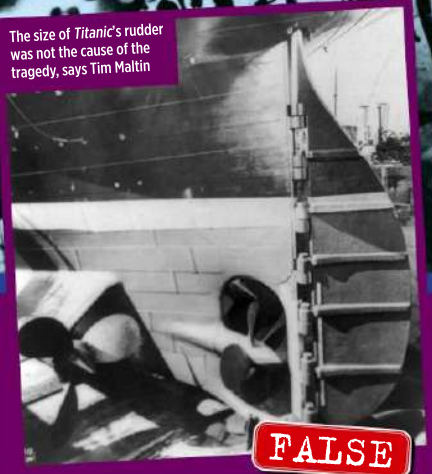
"Another important thing to note is that *Titanic* didn't sink because of weakness in its steel plates. It sank because the impact of the collision caused the heads of the cast-iron rivets holding them in place to break off, allowing the plates to separate. The force at which *Titanic* hit the iceberg was enough to lift the Washington Monument – it would have been like an explosion, and the rivet heads were simply not designed to withstand that much force.

"*Titanic*'s hull failed at its weakest point – the rivets. But that doesn't mean the rivets weren't strong enough; the hull simply wasn't designed to have that kind of force applied to it."

MAIN: A scene from *A Night to Remember* shows overcrowded lifeboats being lowered from *Titanic*. In reality, many were launched half-empty

RIGHT: First Officer William Murdoch, who died in the sinking, was responsible for lifeboats on *Titanic*'s starboard side

The size of *Titanic*'s rudder was not the cause of the tragedy, says Tim Maltin



FALSE

TITANIC'S RUDDER WAS TOO SMALL, WHICH MEANT IT WAS UNABLE TO TURN QUICKLY ENOUGH TO AVOID THE ICEBERG

"*Titanic*'s rudder was the same size as its sister ship, *Olympic*, which would later be the only merchant vessel in World War I to sink an enemy submarine," says Maltin. "On seeing the enemy submarine, *Olympic* managed to turn so quickly that it rammed and sank it. Indeed, one of its wartime captains commented that *Olympic* was the best ship he'd ever handled, so *Titanic*'s problems were definitely not down to having a small rudder!"

PARTLY TRUE

LIFEBOATS WEREN'T AT FULL CAPACITY WHEN THEY WERE LAUNCHED

"This is a really interesting 'myth' and one that is partly true and partly false," says Maltin. "Second Officer Charles Lightoller was in charge of filling lifeboats along *Titanic*'s port side, and his rule was women and children first. First Officer William Murdoch, however, who was organising the loading of lifeboats on the starboard side of the ship, was filling them with women and children first, but then allowing men to board if there were no women or children waiting." The crew tried to launch the lifeboats as quickly as possible and one boat was lowered almost empty because it was feared that the ship would sink quicker than it did; the idea was that it was better to have partly empty lifeboat waiting in the water to pick up survivors, rather to have completely filled lifeboats not being launched in time and going down still tied to the ship.

"Another problem," continues Maltin, "was that every lifeboat had to have six crew members to row it. But these rowers were the people who also knew how to lower the lifeboats. So with every boat that left *Titanic*, the launching crew got smaller and smaller, and it took longer and longer to get lifeboats onto the ocean. It is true that many lifeboats were not filled to capacity, but it's also important to remember that, for the first hour or so, it was a real act of bravery to get into a lifeboat at all. No one believed the mighty *Titanic* would actually sink, so there was more fear of dying in a lifeboat than if they stayed on board." ⊙

INTERVIEW AND WORDS: CHARLOTTE HODGMAN

THE SHIP OF DREAMS?

Before its tragic demise, RMS *Titanic* was the ship that everyone wanted a ticket for

It was supposed to be the vessel that would revolutionise transatlantic travel, but RMS *Titanic* will forever be remembered for its disastrous maiden voyage that claimed more than 1,500 souls.

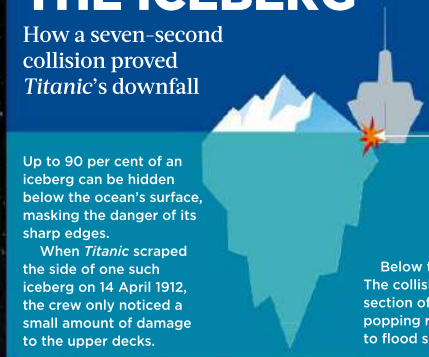
From planning to construction, the ship was a marvel in terms of its record-breaking size and opulent interiors. From the moment it departed Southampton on 10 April 1912, those lucky enough to be travelling in first class were treated almost like royalty.

Indeed, all eyes were on *Titanic* as it set sail across the Atlantic – as the largest moving object ever built by human hands, it certainly would have been a magnificent sight to behold.

ILLUSTRATION BY MAX ELLIS

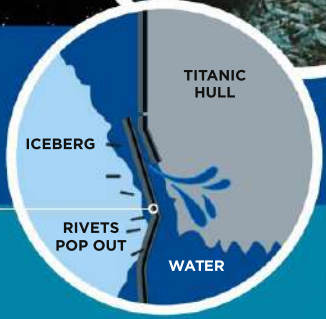
THE ICEBERG

How a seven-second collision proved *Titanic*'s downfall



Up to 90 per cent of an iceberg can be hidden below the ocean's surface, masking the danger of its sharp edges.

When *Titanic* scraped the side of one such iceberg on 14 April 1912, the crew only noticed a small amount of damage to the upper decks.



Below the waterline, however, it was a different story. The collision caused the steel plates along a 76-metre section of *Titanic*'s submerged hull to buckle inwards, popping rivets and opening the ship to the sea – enough to flood six of its 16 supposedly watertight compartments.

UNPREPARED
Titanic sailed with just 20 lifeboats on its maiden voyage – enough to hold approximately half of those on board, but still exceeding the number of boats required by the British Board of Trade

JUST FOR SHOW
Although *Titanic* had four funnels, only three were functional. The funnel nearest the stern was added for cosmetic purposes: four was thought to be more aesthetically pleasing

FRESH WATER
Three pairs of tanks held 792 tonnes of fresh water to supply the boilers, as well as for passengers to wash with

VITAL STATISTICS

SYMPHONY OF THE SEAS

Launched: **2017** Length: **362.1 metres** Width: **65.68 metres** Cruising speed: **22 knots**

RMS QUEEN MARY 2

Launched: **2003** Length: **345.03 metres** Width: **48.7 metres** Max speed: **30 knots**

RMS TITANIC

Launched: **1911** Length: **269 metres** Width: **28.2 metres** Max speed: **23 knots**

AIRBUS A380

Launched: **2005** Length: **73 metres** Width: **79.8 metres** Max speed: **550 knots**

MAYFLOWER (APPROXIMATE MEASUREMENTS)

Launched: **c1620** Length: **27 metres** Width: **7.62 metres** Max speed: **3 knots**

$6 MILLION

The estimated total value of passengers' belongings that went down with the ship

3,364

Sacks of letters, packages and documents were on board when the ship sank

c50,000

Pieces of bone china crockery, supplied by Stonier and Co of Liverpool, were used for onboard dining

20 MINUTES

The maximum survival time for most passengers who plunged into the below-freezing waters of the North Atlantic

£900,000

The amount paid at auction in 2013 for a violin played by band leader Wallace Hartley

20

The number of lifeboats on board (2 wooden cutters, 14 standard wooden lifeboats and 4 collapsible canvas lifeboats)

MASTER OF THE SEAS

While *Titanic* did not have sails, it still had two masts. These were used to fly the flags of the White Star Line and support its wireless aerial

DID YOU KNOW?

WHAT COULD HAVE BEEN?

It's believed that *Titanic* received at least six iceberg warnings on 14 April. The most important, sent by SS *Mesaba* and alerting the ship's crew to a large field of ice directly in its path, was never passed on to the bridge.

BUILT TO IMPRESS

The grand staircase was a focal point for first-class passengers on *Titanic*. Leading from the promenade deck to the dining saloon, it boasted crystal chandeliers and a glass dome

FULL STEAM AHEAD

When fully fired up and operational, *Titanic*'s boilers could consume around 850 tonnes of coal per day. Firemen – known as the 'Black Feet Brigade' for the coal dust that coated them – shovelled a tonne of coal into the boiler furnaces every two minutes

LUCK, BRAVERY AND TRAGEDY

Titanic brought people together from all levels of society – from the wealthy to those seeking a new start

THE ASTORS

▼ John Jacob Astor IV (47) and his 19-year-old wife Madeleine were the wealthiest couple aboard *Titanic*, and among the richest in the world. Astor, an American business magnate, was believed to be worth more than $80 million when he went down with the ship. The couple had cut short an extended honeymoon across Europe and Egypt – a trip taken to escape the gossip surrounding their 28-year age gap and marriage – after Madeleine had fallen pregnant. Wanting the child to be born in America, they had booked passage home on *Titanic*. Madeleine was safely conveyed onto a lifeboat and later remarked how many of the men left on board didn't seem to be alarmed at the situation. Her husband's body was later recovered from the ocean. Madeleine gave birth to John Jacob Astor VI in August 1912 – he was nicknamed the *Titanic* baby.

ALFRED NOURNEY

▼ Dutch-born Alfred Nourney was keen to live a life of luxury on *Titanic*. To avoid a scandal after getting a woman pregnant, Nourney was journeying from his home in Cologne, Germany, to stay with relatives in America. Travelling under the pseudonym Baron Alfred von Drachstedt, Nourney brought with him jewellery and expensive clothes to fool people of his fake aristocratic status, and though he boarded second class at Cherbourg he soon requested a transfer to first class. He was one of the first into a lifeboat, where he is said to have smoked and continually fired his gun into the air. One story claims that on the rescue ship RMS *Carpathia,* Nourney's behaviour was less than gentlemanly, and he was allegedly found asleep on a pile of blankets meant to be given out to survivors. Once in the US, Nourney claimed he had lost all his money on board and returned to Germany, where he later joined the Nazi Party.

THOMAS ANDREWS

▶ One of the minds behind the construction of *Titanic,* Andrews was on board for the ship's maiden voyage as part of the guarantee group – representatives from Harland and Wolff who were there to look for things that could be improved and to fix any minor problems. After the collision, Andrews informed the captain that the ship would sink within two hours. Knowing there were not enough lifeboats, he tirelessly searched cabins – persuading people to put on lifejackets and get on a lifeboat if they could. A steward claimed to have seen Andrews in the first-class smoking room, staring at a painting of Plymouth Sound (which *Titanic* was due to visit on its return) making no attempt to save himself. Others, however, said they had witnessed him assisting with the evacuation until the bitter end before jumping overboard himself. His body was not recovered.

GETTY IMAGES X4, ALAMY X1, REPRO: SCHWAIGER X1, TITANIC HISTORICAL SOCIETY X1

DOROTHY GIBSON

◀ American actress Dorothy Gibson had starred in many theatre productions and silent movies before her journey on *Titanic*, and was returning from a holiday in Italy with her mother. Gibson and her mother escaped *Titanic* on the first lifeboat to leave the sinking ship, but they found themselves in peril again when a hole was discovered in the bottom of the lifeboat – it had to be quickly plugged with clothing. Just days after her return to New York, Gibson re-enacted the experience in the silent film *Saved from the Titanic* – the first movie about the disaster – which premiered on 16 May 1912. Gibson co-wrote the film and even wore the same clothes she had worn on the night of the sinking.

RICHARD NORRIS WILLIAMS

▶ The American tennis player Richard Norris Williams had boarded *Titanic* as a first-class passenger at Cherbourg and was heading home to take part in a tournament. After the ship struck an iceberg, but before the real danger had become apparent, 21-year-old Williams had come across a steward trying to help a panicked passenger who was stuck inside their cabin. Williams broke down the door to rescue the passenger – but attracted the ire of a steward, who threatened to sue him for damage. Williams was among those who jumped into the below-freezing water, forced to cling to a lifeboat while he awaited rescue; he was later told by the doctor on board the rescue ship *Carpathia* that his legs – damaged by the extreme cold – may need to be amputated. Williams refused and walked up and down the deck to restore circulation; just six weeks later he won a tennis tournament.

JOSEPH PHILIPPE LEMERCIER LAROCHE

◀ Haiti-born engineer Joseph Laroche was travelling second class with his wife and two daughters when *Titanic* sank. Joseph had moved to France at the age of 15 to study engineering, but racial discrimination had prevented him from obtaining a well-paid engineering job in that country. When his French wife, Juliette, fell pregnant with their third child, they decided to return to Haiti. Joseph, who is believed to have been the only black passenger on board *Titanic*, managed to get his family into a lifeboat but he went down with the ship; his body was never found.

MARGARET 'MOLLY' BROWN

▼ US socialite Margaret Brown posthumously became known as the 'Unsinkable Molly Brown' following her *Titanic* experiences. Molly's husband, from whom she had separated, was mining engineer James Joseph Brown, and it was his business successes that had shot the couple to the highest levels of Colorado society. Molly had been travelling in Egypt with the Astors before booking a trip home on *Titanic* after hearing her grandson was ill. Once aboard a lifeboat, she helped to row, encouraging other women to do the same in order to keep warm. This was despite the protestations of the quartermaster in charge, whom she allegedly threatened to push overboard. Molly also tried in vain to persuade the quartermaster to turn back and look for survivors, and once aboard *Carpathia*, helped her fellow survivors, handing out food and blankets. She would later set up a survivors' committee to help those who had lost everything. The fame she gained enabled Molly to help other charitable causes, including helping to establish a French relief station for injured soldiers during World War I.

VIOLET JESSOP

▶ Violet Jessop may go down in history as one of the luckiest people to have travelled at sea – after surviving collisions on all three of White Star Line's Olympic-class liners. The daughter of Irish immigrants to Argentina, Jessop and her family moved to England after the death of her father, and she began working as a stewardess on board passenger liners. In September 1911, Violet was working on *Titanic*'s sister ship RMS *Olympic* when it collided with the warship HMS *Hawke* near the Isle of Wight. A year later, Violet was again working as a stewardess, this time on *Titanic*. As the ship was sinking, Violet was asked to assist non-English speaking passengers onto lifeboats before being ordered into lifeboat 16 herself. In 1916, Violet was on board the third of the Olympic-class ships, RMS *Britannic* – which had been converted into a hospital during World War I – when it sank in the Aegean Sea after hitting a mine. Thirty people were killed but Violet survived the sinking, although she suffered a severe head injury. Despite all of these close calls, she continued to work at sea. She died in 1971, aged 83. ⊙

WORDS: EMMA SLATTERY WILLIAMS

COUNTDOWN TO DISASTER

As day turned to night on 14 April 1912, little did passengers and crew on board *Titanic* know of the horrors that lay ahead

14 APRIL 1912

09:00

Having left Southampton four days earlier on its maiden voyage, *Titanic*'s radio operators receive their first warning about drifting ice in the area to which the ship is heading. The message, delivered by RMS *Caronia*, tells of the presence of "bergs, growlers and field ice" (growlers being smaller, hard-to-spot bergs) a day or so's sailing from *Titanic*'s current position. A little more than an hour later, a telegraph arrives in the hands of *Titanic*'s captain, the highly experienced Edward J Smith, a man with more than 40 years at sea under his belt and who had previously captained *Titanic*'s sister ship, *Olympic*. Smith thanks *Caronia*, part of the fleet of the rival Cunard Line, for the warning.

11:00

Due to high winds, Captain Smith decides to cancel *Titanic*'s first lifeboat drill. This will prove to be significant when the evacuation of the ship becomes frantic almost 13 hours later.

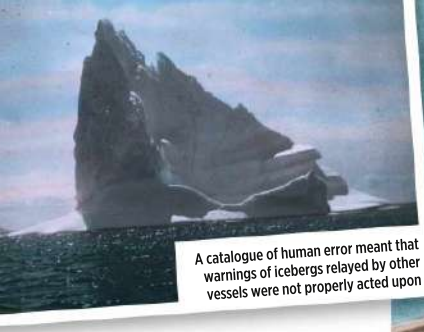
13:42

Another warning comes *Titanic*'s way, this time from the Greek ship *Athenai*, relayed via RMS *Baltic*. It cautions the crew about "passing icebergs and large quantities of field ice" in the area. The chairman of the White Star Line, J Bruce Ismay, is on board *Titanic*; he always travels on the maiden voyages of his ships. Smith informs Ismay that a sharp lookout will be kept and that ice will be seen in time to avoid it, given the calm and clear weather conditions. *Titanic*

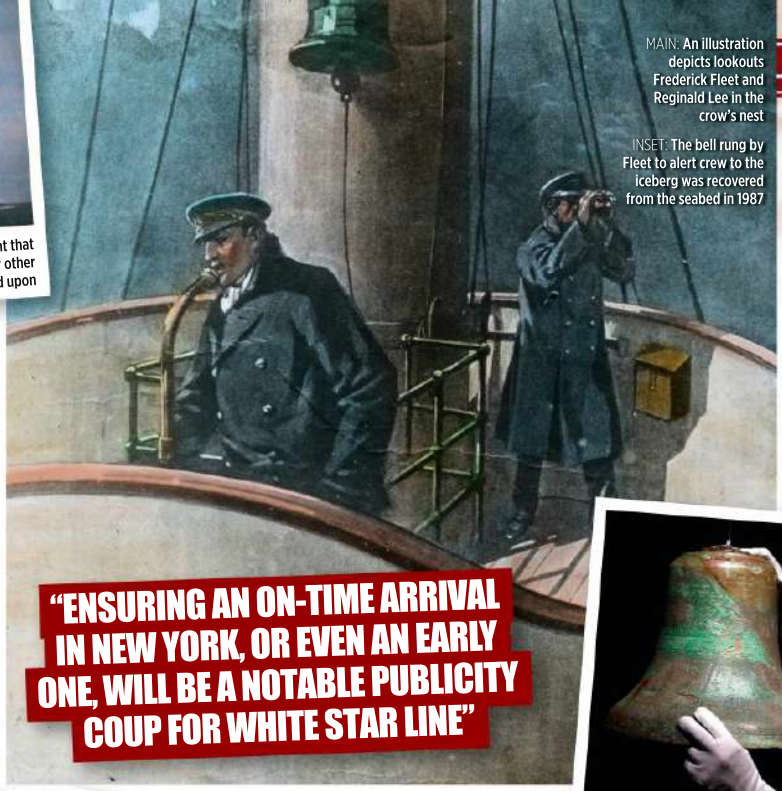
ABOVE: **Passengers on an unnamed steamship look out over a field of ice – much like the one faced by *Titanic***

RIGHT: **Captain Edward J Smith pictured in 1911 – a year before he led the ship's doomed maiden voyage**

GETTY IMAGES X5, ALAMY X3



A catalogue of human error meant that warnings of icebergs relayed by other vessels were not properly acted upon



MAIN: An illustration depicts lookouts Frederick Fleet and Reginald Lee in the crow's nest

INSET: The bell rung by Fleet to alert crew to the iceberg was recovered from the seabed in 1987

"ENSURING AN ON-TIME ARRIVAL IN NEW YORK, OR EVEN AN EARLY ONE, WILL BE A NOTABLE PUBLICITY COUP FOR WHITE STAR LINE"

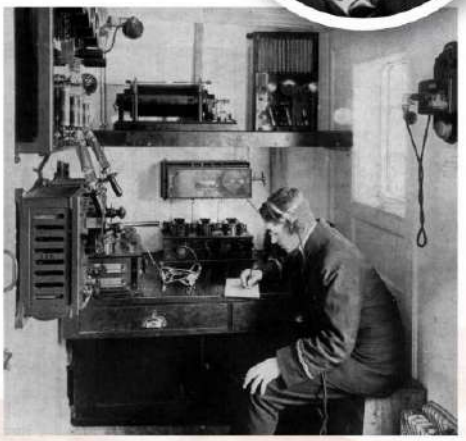
keeps to the longer steamer track to New York, which is advised during the iceberg season.

19:20

The radio operators pick up further reports, this time issued by SS *Californian*, of three large icebergs. This message is delivered to the bridge by radio operator Harold Bride, where it is posted on the notice board for officers. Captain Smith is not on watch at the time, and is dining with passengers travelling first class, leaving the ship in the command of *Titanic*'s Second Officer, Charles Lightoller.

21:40

Senior radio operator Jack Phillips receives yet another warning from yet another ship, SS *Mesaba*, reporting of multiple large icebergs just 15 miles ahead of *Titanic*. However, there's a communication breakdown. Messages for a ship's captain should be prefixed with the letters 'MSG', but because *Mesaba*'s missive hasn't been labelled correctly, Phillips does not treat it with the utmost urgency. Instead, he carries on with the pressured task of sending a large backlog of passenger telegrams now that he is within range of the Cape Race relay station on Newfoundland.



MAIN: A radio room similar to that found on *Titanic*. Senior wireless operator Jack Phillips spent the evening of 14 April sending passengers' telegrams

INSET: A young Harold Bride, who served as the ship's junior wireless operator

22:00

Two of the ship's lookouts – Frederick Fleet and Reginald Lee – take their positions up in the crow's nest. The task of spotting icebergs, especially the smaller growlers, is difficult for a number of reasons. It's a moonless night, meaning that they're peering into darkness, save for bright starlight and the ship's own lights. It's also an incredibly still night. Had the ocean been choppier, the pair could have spotted water breaking against the icebergs. And they're without binoculars, which have been misplaced during a crew rearrangement. However, as binoculars do not speed the process of spotting icebergs at night this position is not corrected.

22:55

A casual but vital warning comes from the nearby *Californian* – "Say, old man, we are stopped and surrounded by ice". But in *Titanic*'s radio room, Jack Phillips is too preoccupied with sending passenger telegrams, and the message from the nearby ship is so loud that it nearly deafens him. His response is curt to say the least: "Shut up! Shut up! I am busy. I am working Cape Race."

23:30

With his ship stationary until at least first light, when it can safely navigate its way out of what will become known as 'Iceberg Alley', *Californian*'s radio operator switches off his equipment and goes to sleep after 16 hours of work, quite possibly a little aggrieved at the rudeness of his opposite number aboard *Titanic*. Had he held his position for just half an hour longer to receive the distress calls of the other ship, the subsequent loss of life may have been much less.

23:39

Titanic, now 400 nautical miles south of the Grand Banks of Newfoundland, is seconds away from disaster. But despite the multiple warnings its crew have received throughout the day, the vessel continues to crack on at just two knots slower than its top speed of 24 knots because the weather remains unusually clear. Ensuring an early arrival in New York would be a notable publicity coup for the White Star Line company and the new *Titanic*.

Up in the crow's nest, Frederick Fleet spots an iceberg right in the ship's path. He rings the look-out bell three times and calls the bridge, where Sixth Officer James Moody receives Fleet's urgent, unequivocal words: "Iceberg, right ahead!" Moody relays the message to First Officer William Murdoch, who in ▶

LEFT: *Carpathia*'s Harold Cottam (pictured as a young telegraphy student) picked up *Titanic*'s distress signal

MAIN: *Women and Children First*, by Fortunino Matania, was painted soon after the disaster

turn instructs Quartermaster Robert Hichens to instantly change the ship's course to "hard-a-starboard" and for the engines to be put into reverse.

23:40

Although it takes around 30 seconds for the steam-powered mechanism to turn the rudder, that's just enough time to avoid a head-on collision between liner and iceberg. But the starboard side does make significant contact, with an underwater spur of ice scraping along the ship for seven seconds. In his cabin, Captain Smith feels the impact and quickly makes his way to the bridge where he's informed of the collision. Many passengers continue to sleep, unaware of what's just occurred and the devastation it will unleash.

23:45

All of *Titanic*'s engines are switched off and the ship now faces north, albeit drifting southwards. The chief architect, Thomas Andrews, is also on board for this maiden voyage and is summoned to the bridge by Smith. *Titanic* is divided into 16 watertight compartments. Even if four of the forward compartments were to be flooded, the ship should still remain afloat. But when Andrews surveys the damage over the next few minutes, he finds that five compartments have been ripped open by the collision. His diagnosis to Smith is a grim one: Andrews predicts that *Titanic* will be completely underwater within a couple of hours, if not sooner.

15 APRIL

00:05

Smith orders the lifeboats to be readied in order for as many people to be evacuated as possible. Stewards move speedily though the ship, banging on cabin doors to rouse the occupants, whether crew or fare-paying passengers, since *Titanic* has not been fitted with a public-address system. The evacuation is an unequal one. The ratio of stewards to passengers in the first-class accommodation means the latter have great assistance from the staff, helping them to dress and escorting them up onto deck. In the more populous third-class accommodation, passengers are largely left to manage their own passage from cabin to deck, with directions from stewards. In the first-class lounge, the band play to entertain those waiting for the lifeboats.

00:20

With passengers instructed to put on lifebelts, the loading of the lifeboats gets underway. *Titanic* has 20 lifeboats in all, with a combined capacity of 1,178 – little more than half the number of people on board. The ship had been designed to carry 64 lifeboats, but the White Star Line company had complied with the current regulations and only fitted fewer than a third of them. Lifeboats on a properly subdivided ship like *Titanic* in 1912 were intended to ferry passengers from the stricken vessel to a nearby rescue ship, and uninterrupted views of the ocean from the main deck were deemed to be more pleasing to the eye of its passengers, rather than rows of lifeboats. With this insufficient number of lifeboats, Captain Smith explains the priority to First Officer William Murdoch and Second Officer Charles Lightoller: "put the women and children in and lower away".

By now, several vessels have received the distress signals sent by radio operators Phillips and Bride. Many are too distant to offer assistance, but *Carpathia* – another liner belonging to the rival Cunard company – is comparatively close at 58 nautical miles away. "Come at once. We have struck a berg." *Carpathia* immediately changes course, but it will still take at least three hours to arrive. Exactly what its crew will encounter when they eventually arrive remains unclear.

00:25

The grim mathematics are inescapable. By now, 45 minutes after the collision, 13,700 tonnes of icy water have poured into a ship that's only capable of pumping out 1,700 tonnes per hour. *Titanic*'s fate is sealed as the much nearer *Californian*, with its radio operator asleep, does not understand the ship's plight and fails to come to its aid.

00:45

The first *Titanic* lifeboat, No 7, is lowered onto the ocean and starts rowing away from the stricken ship. There are believed to be just 27 people aboard it, 38 fewer than its capacity. A significant number of first-class passengers refuse to board the lifeboats. Among them is the industrialist millionaire Benjamin Guggenheim who, along with his valet, removes his life-vest and changes into evening wear, including a top hat. "We have dressed up in our best and are prepared to go down like gentlemen", he is reported to have said.

Wealthy businessman Benjamin Guggenheim perished along with his valet, having changed into evening clothes so they could "go down like gentlemen"

Others don't have an option. Very few third-class passengers will make it onto the deck, let alone find a seat in a lifeboat. Indeed, many third-class passengers travelling as families choose to stick together and trust the ship, rather than have the women and girls risk their lives on the ocean at night in a small lifeboat, and abandon the male members of their family – including boys of 13, who are regarded as adults in 1912.

GETTY IMAGES X4, ALAMY X2

DID YOU KNOW?

A MINER OVERSIGHT

The decision to set sail with just 20 lifeboats was bolstered by the assumption that plenty of vessels could come to *Titanic*'s aid in an emergency. However, fewer ships were in the North Atlantic due to a miners' strike, which had caused a shortage of high-grade steam coal.

"THERE ARE REPORTS THAT THE CREW ARE EITHER GUARDING OR LOCKING DOORS TO PREVENT A MASS RUSH FOR THE LIFEBOATS"

ABOVE: **A still from James Cameron's 1997 blockbuster, *Titanic*, showing the urgent scramble for lifeboats**
RIGHT: **A lifebelt worn by a survivor, provided courtesy of a waiter working on the rescue vessel *Carpathia***

MAIN: **A depiction of *Titanic*'s final moments. The vessel's bow and stern broke into two separate sections, before plunging to the ocean floor**

INSET: **Fifth Officer Harold Lowe attempted to restore order among panic-stricken passengers**

"THOSE WHO HAVE SURVIVED BEING THROWN INTO THE WATER WILL PERISH, MANY FROM CARDIAC ARREST"

00:55

Lifeboat No 7 is far from the only under-populated craft; No 6 is thought to have only 23 people on board. More lifeboats are lowered every few minutes, rarely at capacity. Lifeboat No 1 carries just a dozen passengers. Early lifeboats are sent unfilled due to the initial reluctance of passengers nearby to enter them, and because the crew's main objective is to get all the boats launched before *Titanic* sinks with its lifeboats still attached to the ship.

01:30

After the first hour following the collision, the downward angle of the ship had remained relatively steady at around five degrees, offering a modicum of reassurance to both passengers and crew that they might be rescued in time. However, by 01:30, that angle has increased to 10 degrees as *Titanic* continues to take on water at an alarming rate. A group of male passengers tries to rush Lifeboat No 14 as it's being lowered with 40 people already on board. Three shots fired in the air by Fifth Officer Harold Lowe manages to halt the melee.

01:35

At the wireless operators station, an ominous message is sent over the ship's radio and picked up by *Carpathia*: "Engine room getting flooded." Ten minutes later, the update is even more alarming: "Engine room full up to boilers." It will be the final intelligible message sent over *Titanic*'s radio system.

02:05

The last of the 20 lifeboats – collapsible D – is lowered from the ship. The last few lifeboats have been closer to capacity now that the fate of the "unsinkable" ship is clear to all left on board.

02:15

Titanic's downward angle gets much steeper as water pours in through open port holes and deck hatches into areas of the ship previously unflooded. A wave caused by the rapid sinking of *Titanic* causes people to be swept into the ocean. The front funnel collapses and several passengers are crushed to death.

02:18

The ship's lights go out and the frantic scene is now plunged into darkness. Under the weight of the stern, which is now lifted out of the water by the sinking bow, *Titanic* begins to split into two.

02:20

The world's most modern ocean-going liner completely disappears under the surface of the Atlantic. "There is no danger that *Titanic* will sink," White Star Line vice-president Phillip Franklin reassures the waiting press, after news of the collision first reaches New York. But those who have survived being thrown into the water will perish, many from cardiac arrest, within half an hour. Second Officer Lightoller, the most senior crew member to survive the disaster after managing to cling onto an upturned lifeboat, will later describe the sensation of plunging into the freezing waters as being akin to "a thousand knives" penetrating his body.

02:26

The bow and the stern, now separated, reach the seabed, having rapidly corkscrewed to a depth of nearly 4,000 metres in just six minutes.

03:30

Rockets fired by *Carpathia* are spotted by those aboard the lifeboats. Having dodged innumerable icebergs, its crew have travelled at high speed, with the heating system turned off so as much steam as possible could be available for its engines.

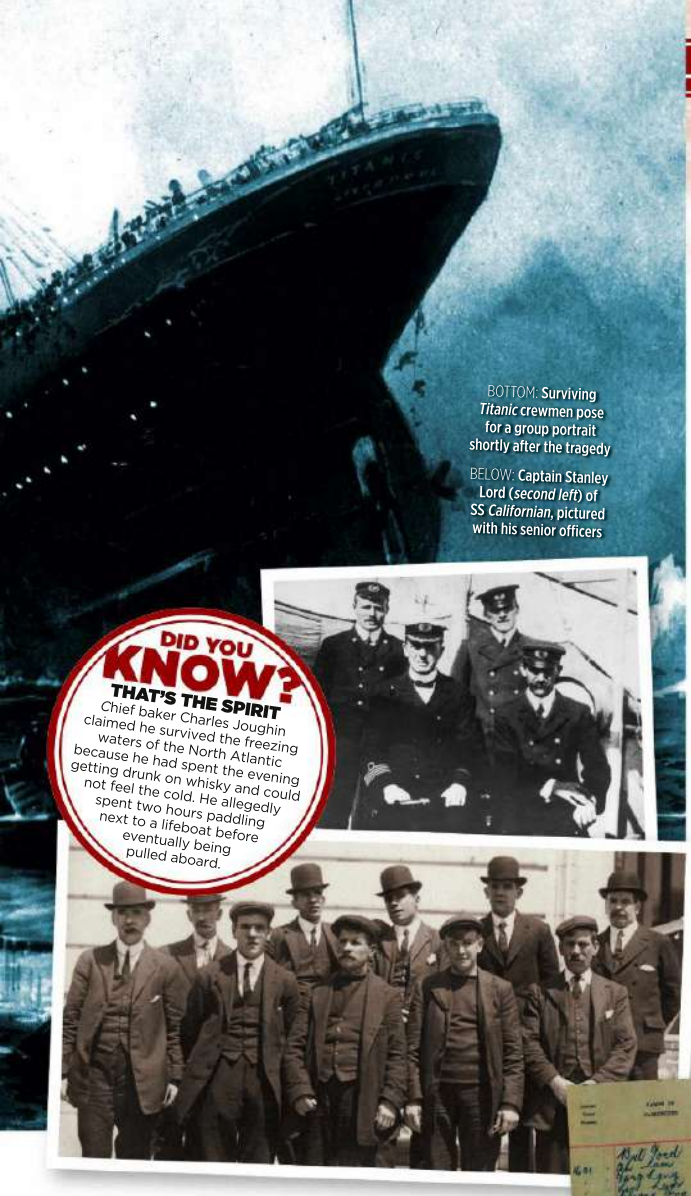
04:00

The rescue begins; survivors are brought on board *Carpathia* by rope ladder and slings. Children are hauled aboard in mail sacks.

08:30

Californian arrives at the scene of the disaster but, after a two-hour search, they find there are no remaining survivors to rescue. The ship's radio operator had only

GETTY IMAGES X4, ALAMY X1, NATIONAL ARCHIVES X1, FANG LANG IMAGE COURTESY OF LP FILMS



BOTTOM: Surviving *Titanic* crewmen pose for a group portrait shortly after the tragedy

BELOW: Captain Stanley Lord (*second left*) of SS *Californian*, pictured with his senior officers

DID YOU KNOW?

THAT'S THE SPIRIT

Chief baker Charles Joughin claimed he survived the freezing waters of the North Atlantic because he had spent the evening getting drunk on whisky and could not feel the cold. He allegedly spent two hours paddling next to a lifeboat before eventually being pulled aboard.

learned of the disaster when he logged back on early this morning.

08:50

The last of the survivors are now aboard *Carpathia*. The decision is made to take them to New York City, *Titanic*'s intended destination. J Bruce Ismay is among those rescued, having found himself a berth on a lifeboat (and for which he will later be renounced as a coward). Ismay has already sent a grim message to the White Star Line offices in Manhattan, which was relayed to the waiting press. "Deeply regret advise you *Titanic* sank this morning fifteenth after collision iceberg, resulting serious loss of life, further particulars later."

18 APRIL

21:30

After a difficult voyage through ice, fog and thunderstorms, *Carpathia* arrives in New York. It initially visits Pier 59, where the empty lifeboats are unloaded to go back into White Star Line's care, before sailing on to Pier 54, where an estimated 40,000 people are waiting in heavy rain. Only 705 *Titanic* passengers and crew have made it to New York. More than 1,500 lives have been lost at sea.

WORDS: NIGE TASSELL

WHAT HAPPENED TO *TITANIC*'S CHINESE PASSENGERS?

Not all survivors of the disaster received a warm welcome on their arrival in New York

Among the hundreds of men and women on board *Titanic* were eight Chinese seamen – of whom two were Cantonese and six were British subjects from Hong Kong – who were travelling third class to join the Donald Line steamship *Annetta*, due to sail from New York to Cuba. All eight men managed to make it into lifeboats but only six – Ah Lam, Bing Lee, Fang Lang, Chip Chang, Foo Cheang and Ling Hee – survived the disaster, and their arrival in New York was far from welcome.

Much of the men's story has been shaped by anti-Asian sentiment that was prevalent in the west in the early 20th century, and newspaper reports that followed the disaster vilified the group. An article in *The Brooklyn Daily Eagle* of 19 April 1912 described the men as "creatures" who had "at the first sign of danger... sprung into lifeboats... and concealed themselves beneath the seats" where it was alleged they were crushed by the weight of the passengers seated above them. Other reports accused the men of having dressed as women in order to gain priority seats in the lifeboats. Nothing was written of the heroism of at least one of the group – believed to be Fang Lang – who, having been found clinging to a door by a returning lifeboat, then helped to row fellow survivors to the rescue ship.

When *Carpathia* landed in New York, the six men were refused entry to the US due to the Chinese Exclusion Act of 1882, which prevented Chinese immigration to the US, and were sent on to Cuba. Their stories – and the truth of their escape from the doomed ship – were then largely lost to history. But a new documentary film (*The Six*), which has recently premiered in China, has shone a light on these men once more and dispelled the stigma and untruths that still surround their *Titanic* story.

ABOVE: *Titanic*'s outward-bound passenger list shows the names of all eight Chinese passengers

RIGHT: Fang Lang is believed to have helped row fellow survivors to safety

HEARTBREAK AND HORROR

Wireless operator Harold Bride is questioned about SOS messages sent during *Titanic*'s sinking

As news of what had occurred in the Atlantic came to light, the wheels were set in motion to recover the bodies of those who were lost and find out what had happened

The high number of fatalities from *Titanic* sent shockwaves around the world, as people tried to comprehend how this ship – of which so much had been expected – could now be lying at the bottom of the Atlantic.

Four rescue boats were sent out to undertake the grim job of recovering the bodies of those who had died. On 17 April, CS *Mackay-Bennet* became the first to do so, setting out from Halifax, Nova Scotia. Three more boats would follow when it became clear that one would not be enough for the task. The ships carried coffins (as well as ice to preserve the bodies), and the searches lasted for six weeks. A few bodies were picked up by other vessels in late May and June. Three were even found more than 200 miles away from *Titanic*'s wreck site, carried by the current.

A mere 330 bodies were recovered out of the approximately 1,500 people who lost their lives – the exact number of fatalities is disputed. Some of the bodies were claimed by relatives and taken away for private burial; another 150 were interred across three cemeteries in Halifax. Many were never identified, with their tombstones simply stating that they had lost their lives during the sinking. Those whose remains were too disfigured and who could not be identified by their possessions were buried at sea. This was most often the case with the bodies of crew members or third-class passengers, who carried few personal items.

CS *Mackay-Bennet* was the first ship to recover bodies from *Titanic* – three more were sent when it became clear how many bodies would need to be retrieved

DID YOU KNOW?

LOST CHILD

It wasn't until 2007 that the remains of a baby boy whose body was recovered by CS *Mackay-Bennet* were identified as being those of Sidney Leslie Goodwin. His entire family had perished on *Titanic* and his remains had earlier been misidentified.

SEARCHING FOR ANSWERS

Almost as soon as the sinking was reported, the US and Britain both launched investigations into the disaster. The US inquiry, led by Senator William Alden Smith, began four days after the sinking; the senator met the rescue ship *Carpathia* at the dock to summon its captain, *Titanic*'s surviving crew, and the chairman and managing director of the White Star Line, J Bruce Ismay, to court. The US inquiries were initially held in New York before moving to Washington DC.

Titanic's high speed, Captain Edward Smith's seeming indifference to iceberg warnings and a lack of knowledge by the crew on how to carry out lifeboat evacuations were pointed at as significant causes of the collision and subsequent loss of life. Most damning of all was the suggestion that SS *Californian* was nearby but its captain had allegedly refused to respond to *Titanic*'s distress signals.

As the highest-ranking White Star Line official to have survived, Ismay was particularly vilified by the investigation and in the subsequent press coverage. He was labelled a coward for taking a place on a lifeboat when so many women and children had not survived. There were also rumours during the initial investigation – though they weren't proven – that Ismay had pressurised Captain Smith to increase the ship's speed so they would arrive in New York

ABOVE: **Senator William A Smith arrives at the US investigation**

ABOVE RIGHT: **J Bruce Ismay addresses the *Titanic* inquiry**

GETTY IMAGES X5, ALAMY X2, TITANIC BELFAST X1

early, surpassing the previous maiden voyage time of *Titanic*'s sister ship, RMS *Olympic*.

The British government inquiry began two weeks later and was carried out by a specially formed commission on behalf of the British Board of Trade – the organisation that determined that *Titanic* was seaworthy and that was responsible for Britain's maritime regulations. Lord Mersey presided over the commission, which heard almost 100 witness testimonies. Over 36 days, White Star Line officials and survivors were questioned by experts in marine law and shipping architecture. This investigation focused on the nautical and navigational aspect of the tragedy, while the US investigation was more intent on finding someone to blame.

Titanic's captain was posthumously absolved of negligence, although it was acknowledged that he had made "a very grievous mistake", while the US inquiry stated that his "indifference to danger was one of the direct and contributing causes".

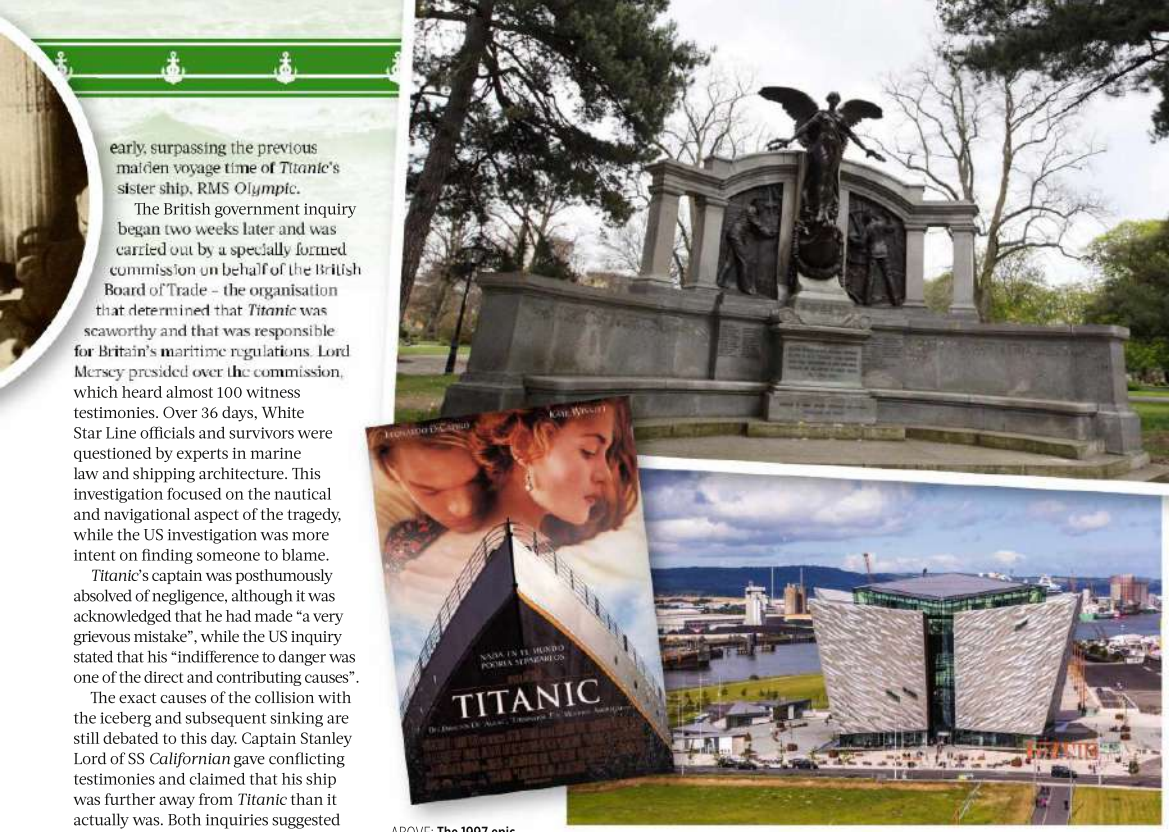
The exact causes of the collision with the iceberg and subsequent sinking are still debated to this day. Captain Stanley Lord of SS *Californian* gave conflicting testimonies and claimed that his ship was further away from *Titanic* than it actually was. Both inquiries suggested he could have potentially saved many lives; though no official action was taken against him, the sinking of *Titanic* would haunt him – and his career – for the rest of his life.

A group of survivors joined together to sue White Star Line, asking for more than $16m in damages. This was later reduced when the US Supreme Court ruled that the causes of the sinking were "unforeseen", and a relatively meagre $664,000 was paid out instead.

The results of both inquiries led to improvements in maritime safety and better standards aboard ships. In 1914, the first SOLAS (International Convention for the Safety of Life at Sea) treaty was established in response to the sinking, and an international ice patrol was set up. Every ship also had to provide enough lifeboats for everyone on board and maintain a 24-hour radio watch. The outbreak of World War I later that same year prevented this from coming into force straight away, but it was adopted into later treaties.

DEVASTATING LOSS

For the residents of the English port of Southampton, the sinking of *Titanic* hit especially hard. Some 724 crew members hailed from the town – yet only 175 came home. One school in the area saw nearly half of its pupils lose their fathers. In Belfast, where *Titanic* was built, grown men cried on the streets. For many years the city sought to distance itself from the tragedy, but in more recent times it has embraced the connection and rejuvenated the docks where the ship was laid down. Both now have museums commemorating the disaster: Titanic Belfast and SeaCity in Southampton (the latter also explores the port's maritime history more generally).



ABOVE: **The 1997 epic *Titanic* is one of the highest-grossing films of all time**

ABOVE RIGHT: **Titanic Belfast, opened in the centenary year of the sinking, is a heritage attraction dedicated to the ship, those who built it and those who perished on board**

TOP: **Southampton's memorial to *Titanic*'s engineers**

Memorials would be raised to the victims, not only in Ireland and Britain, but also in the US, Australia and Canada. For those who survived – or were left behind – there was the Titanic Relief Fund, established to help the orphans, widows and dependants of the crew and passengers who had lost their lives. A similar scheme was established by the American Red Cross.

The outpouring of grief from Britain, the US and the wider world manifested itself in other ways, too. Commemorative postcards were soon produced, as well as specially composed sheet music such as 'The Ship That Never Will Return'. Thus, an enduring fascination with this great tragedy began.

RECREATING AN ICON

There have been several proposals to rebuild *Titanic*, as well as raise the remains of the wreck before it is lost forever, and a host of myths and legends have developed around the sinking. Indeed, such is the captivation with the disaster that it has inspired no fewer than eight English-language films. The first, *Saved from the Titanic*, came out just a month after the sinking and starred survivor Dorothy Gibson.

In 1958, the film *A Night to Remember*, based on Walter Lord's 1955 book of the same name, was released. Based on survivor testimonies, it is widely considered to be one of the most accurate depictions of the maritime disaster. However, the most famous depiction of modern times is undoubtedly James Cameron's Oscar-winning epic *Titanic*, released in 1997 and starring Kate Winslet and Leonardo DiCaprio as fictional passengers.

Of the three great White Star Line ships, only RMS *Olympic* lived up to its expectations as a luxury liner, serving as both a military and civilian vessel, and completing its final voyage in 1935. The third ship, RMS *Britannic*, never carried passengers. It was only ever used as a military vessel, and sank in 1916 after hitting a mine – earning itself the title of the largest ship to be lost during World War I.

WORDS: EMMA SLATTERY WILLIAMS

HUNTING THE WRECK

Finding the doomed ocean liner took years, but once *Titanic* was finally discovered, its wreck raised even more questions, speculation and interest

One of *Titanic*'s engines – four-storey structures that once powered the ship

There were talks about attempting to raise *Titanic* from its watery grave in the Atlantic almost as soon as the survivors had stepped safely onto dry land. However, it wouldn't be for another 73 years that the wreck would finally be found.

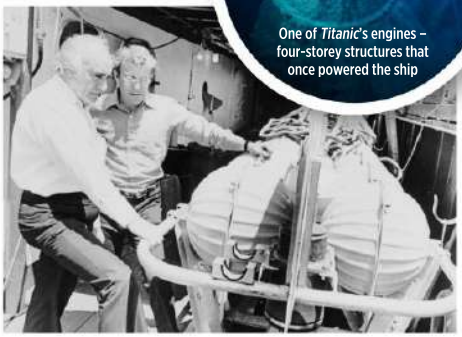
Many ideas, from the impossible to the ridiculous, were suggested as means to locate and raise the ship, including the use of electromagnets and helium balloons. One suggestion that didn't come to pass was to use liquid nitrogen to freeze the water surrounding the wreck, causing it to float back up to the surface. It was estimated that this would have required half a million tonnes of nitrogen.

In 1953, Southampton-based salvage company Risdon Beazley made the first serious, yet unsuccessful, attempt to locate the wreck. Further suggestions were put forward throughout the following decades but financial difficulties and disputing accounts of where the ship actually sank saw all of these fall through – even the Walt Disney Company considered launching an expedition. Between 1980 and 1983, Texan oilman Jack Grimm financed three expeditions, which all failed to find any conclusive sign of the wreck, though it is believed that one of his sonar devices may have passed near it but failed to detect it.

Dr Robert Ballard, an American oceanographer and marine geologist, made his first attempt to find the ship in 1977, but an equipment malfunction put an end to this. Over the next few years, he created new technology to aid in deep-sea exploration – a remote-controlled deep-sea vehicle with sonar and cameras named 'Argo', which could send live images, with a robot named 'Jason' attached to it, which could take close-up images and gather specimens from the sea floor.

In 1982, Ballard approached the US Navy with an offer of collaboration – they agreed to finance his search for *Titanic* and give him use of research vessel RV *Knorr* if he would first look for two missing navy submarines. After locating the second submarine and with only 12 days of his expedition window left, Ballard's team began their search for the missing liner. Instead of looking for the hull of *Titanic*, Ballard's strategy was to search for its debris field, which would be spread over a much larger area. This strategy worked, and just before 1am on 1 September 1985, debris was spotted littering the ocean floor; soon they came across a boiler and then the ship's hull itself. *Titanic*'s final resting place had been discovered.

The ship was lying 373 miles off the coast of Newfoundland and 3,800 metres deep. It lay in two main pieces, resting about 600 metres apart. For the first time in seven decades, new images of



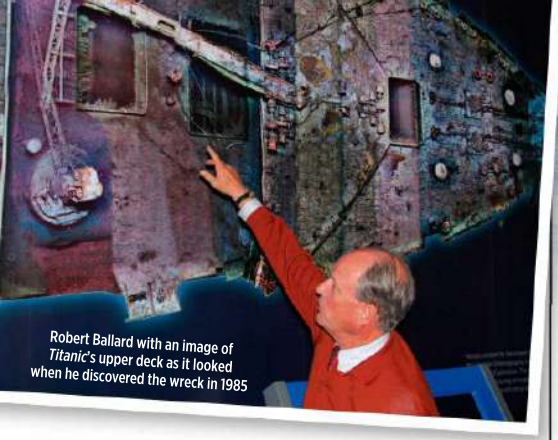
ABOVE: **Jack Grimm (*left*) examines a magnetometer he hoped would help him find *Titanic*. His three attempts ended in disappointment**

Titanic were seen in newspapers across the world. Many more explorations and dives followed. During the production of his 1997 film *Titanic*, director James Cameron undertook explorations into the wreck, using the footage as inspiration, as well as incorporating some of it into

ABOVE: **A pocket watch displaying the time 10 minutes to two, recovered from the body of *Titanic* steward Sidney Sedunary**

MAIN: **Captain Smith's bathtub in 1996. Sadly, a survey of the wreck in 2019 reported that the bath had completely disappeared as the ship and its contents continue to deteriorate**

GETTY IMAGES X7, ALAMY X3



Robert Ballard with an image of *Titanic*'s upper deck as it looked when he discovered the wreck in 1985

the film. These expeditions revealed that much of the ship's interiors were in remarkably good condition, and objects including clothes and jewellery had survived intact, having spent the intervening years shut in trunks and drawers.

Titanic was found 13 miles away from its distress location given at the time of the sinking, due to a one-minute error in transcribing their star sight timings into ships time. *Titanic* survivors were lucky that its actual sinking position was reached by *Carpathia* on its way to the incorrect distress position, but they were very unlucky that the nearby *Californian*, only about 12 miles away and within sight of the sinking ship, mistook *Titanic* and did not come to its aid, partly due to the peculiar atmospheric conditions that night.

Today the wreck is protected by a treaty between the British and American governments, as well as UNESCO. This allows control over entry to the wreck and the removal of artefacts. However, recent expeditions to *Titanic* have revealed that the ship is deteriorating at a rapid rate – metal-eating bacteria and salt corrosion are contributing to the loss – and it may soon completely vanish forever.

WORDS: EMMA SLATTERY WILLIAMS

ABOVE: **Sets of breakfast dishes as they were found on the sea floor during the 1987 expedition**

LEFT: **A number of artefacts have been recovered from the wreck, including this cup – which was later sold at auction**

GET HOOKED

If we've whetted your appetite for all things *Titanic*, why not explore the topic further with our pick of books, films and podcasts

BOOKS

101 Things You Thought You Knew About the Titanic... But Didn't

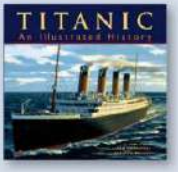
By Tim Maltin and Eloise Aston (Wakefield Press, 2010)

Expert Tim Maltin reveals in short, snappy and fascinating answers why the 'truths' people are told about *Titanic* and the night it sank are mostly fiction – were there enough lifeboats on board? Why didn't the lookouts have binoculars? And was the ship really racing to beat a speed record?

Farewell, Titanic: Her Final Legacy

By Charles Pellegrino (Turner Publishing Company, 2012)

Containing first-hand accounts from the last few survivors of the ship, images of the discovery, and subsequent exploration of the wreck, Charles Pellegrino's book provides an in-depth analysis into *Titanic*'s final hours, and explores the stories of hundreds of people who lost their lives.



Titanic: An Illustrated History

By Donald Lynch (Hyperion Books, 1995)

Through dozens of accurate, full-colour paintings and illustrations by *Titanic* artist Ken Marschall, as well as archive images, readers can again experience what it was like to sail on history's most famous ship – from fixtures and fittings to underwater investigation.

ONLINE AND AUDIO

▶ **Survivors of the Titanic** (BBC Archive): Listen to a collection of stories and memories from men and women who survived the disaster: *bbc.co.uk/archive/survivors-of-the-titanic/z4t28xs*

History Extra

▶ **For podcasts, features, quizzes, interviews and more on *Titanic*, visit the *Titanic* hub on our website: *historyextra.com/titanic***

WATCH

A Night to Remember (1958)

(Streaming on Amazon Prime, available on DVD/Blu-ray)

This documentary drama, based on Walter Lord's book about the sinking of *Titanic*, is told from the perspective of Second Officer Charles Lightoller.

Ghosts of the Abyss (2003)

(Streaming on Amazon Prime and Google Play)

Directed by Academy Award-winning filmmaker James Cameron, this documentary film follows a six-week expedition to explore the wreck of *Titanic*.

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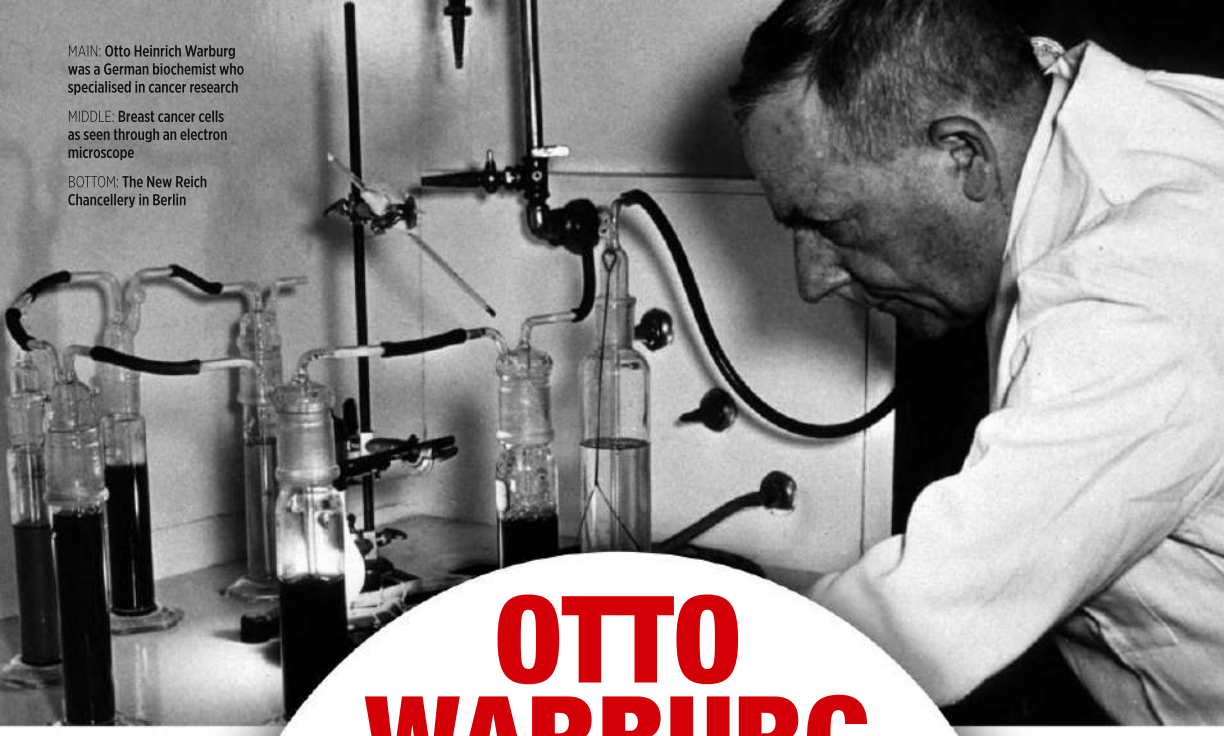


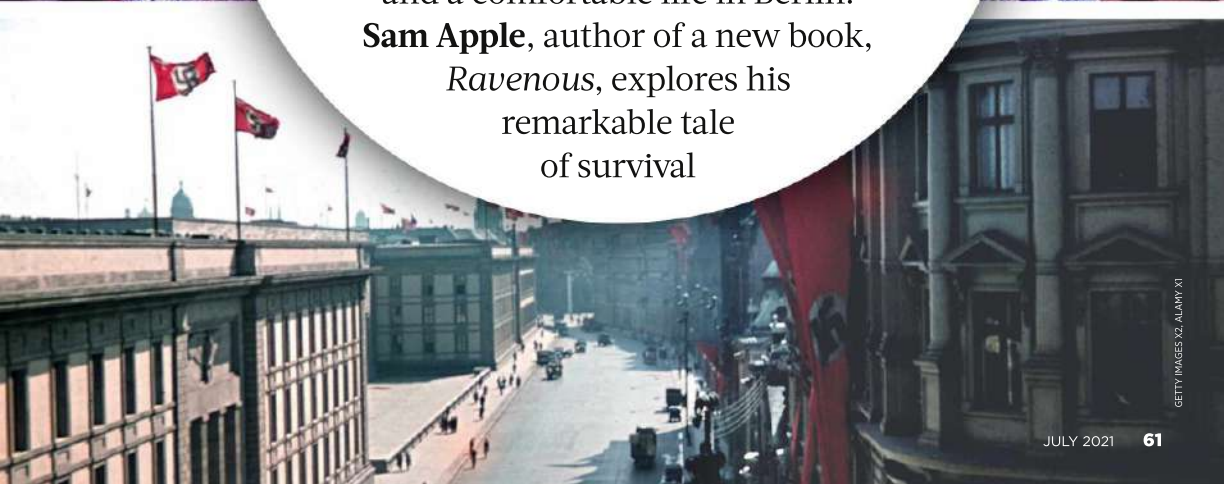
MAIN: Otto Heinrich Warburg was a German biochemist who specialised in cancer research

MIDDLE: Breast cancer cells as seen through an electron microscope

BOTTOM: The New Reich Chancellery in Berlin

OTTO WARBURG AND THE NAZI WAR ON CANCER

While millions of other Europeans with Jewish heritage were being rounded up and sent to their deaths, Otto Warburg enjoyed Nazi protection and a comfortable life in Berlin. **Sam Apple**, author of a new book, *Ravenous*, explores his remarkable tale of survival



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On 21 June 1941, the German biochemist Otto Warburg was summoned to the New Reich Chancellery, the seat of the Nazi government in Berlin. Warburg, winner of the 1931 Nobel Prize for Physiology or Medicine, had good reason to be panicked. He was of Jewish descent and his relatives in finance were members of one of the world's most famous Jewish families. Worse yet for Warburg, he lived with another man, Jacob Heiss, and was rumoured to be a homosexual. That Warburg had survived in Nazi Germany for so long was astounding, but he had recently been evicted from his laboratory. And now he was being called to Nazi headquarters. An unlikely survival story appeared to be coming to an end.

When he arrived at the New Reich Chancellery, Warburg, a lifelong anglophile, was likely wearing one of the elegant suits he ordered from his tailor in London. Walking through the long marble galleries of the New Reich Chancellery, Warburg's carefully polished Scottish wingtips would have clacked ominously with each step.

Science ran in the family: Otto's father Emil (*seated fifth from left*) was a celebrated physicist who worked alongside luminaries such as Marie Curie (*seated second from right*) and Albert Einstein (*standing second from right*). It was Einstein who implored Otto to leave the army to rejoin academia

Viktor Brack was the architect of the Nazi 'euthanasia' programme

German infantry advance in the Soviet Union as Operation Barbarossa begins in 1941; just hours beforehand, Hitler took a break to discuss cancer research

GETTY IMAGES X2, ALAMY X4

The meeting had been arranged by Viktor Brack, a top official in the Chancellery of the Führer. Though Warburg did not know it, Brack was not merely one more Nazi functionary. He had overseen the operation of the Nazis' first systematic killing operation, the 'euthanasia' programme designed to eliminate disabled people. Viktor Brack was the last person someone in Warburg's position would want to see in June of 1941.

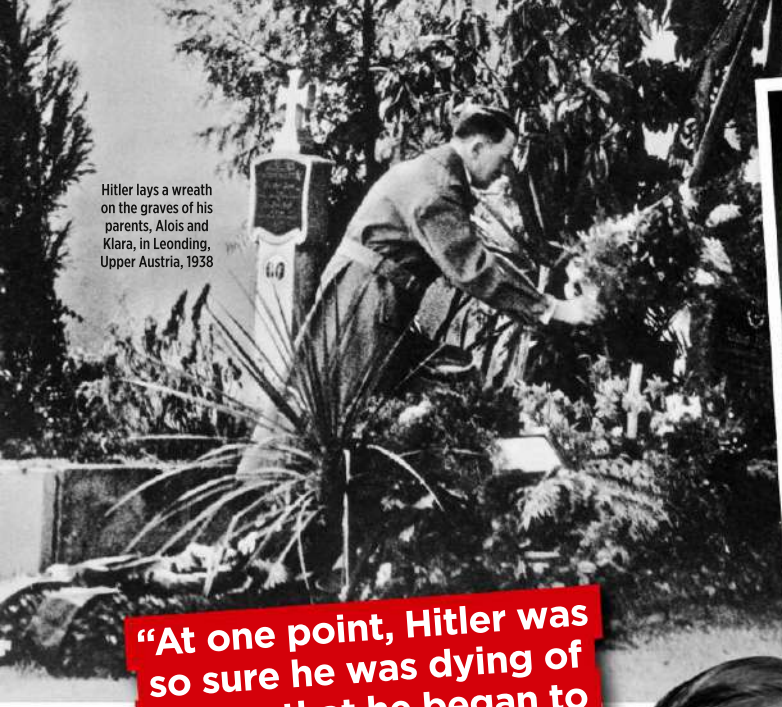
But on that day, Brack, clad in his black SS uniform, had good news for Otto Warburg. The biochemist would not only be allowed to live, he would also be allowed to continue working at his institute. It was a strange episode: a Nazi with a direct role in tens of thousands of murders sparing a suspected homosexual with Jewish heritage. And yet the strangest part of the meeting at the New Reich Chancellery may have been the timing. Early the next morning, the Nazis would launch Operation Barbarossa, then the biggest military operation in history, a massive assault on the Soviet Union that would change the course of the war. Otto Warburg should have been the very last thing on the mind of the Nazi leadership at that moment.

So why were Nazi leaders thinking about Warburg at such a critical moment for their regime? It wasn't just Brack, after all. SS leader Heinrich Himmler's diary shows that he met with Brack to discuss Warburg on that same day, 21 June 1941. The answer is that Warburg was studying a condition that the Nazis cared about as much as almost any other: cancer. Brack, as Warburg later recalled, had given him only one condition: Warburg would have to focus all of his efforts on cancer research. Though there is no direct evidence that Hitler discussed Warburg's case that day, later that same night, only hours before the first German tanks rolled into Soviet territory, minister of propaganda Joseph Goebbels' diary reveals that he and Hitler took a break from planning for the announcement of Operation Barbarossa to discuss new developments in cancer research.

CANCER BREAKTHROUGHS

Hitler's interest in cancer was personal. He was a teenager when he had lost his mother – the only person he seems to have ever truly loved – to breast cancer. From that point on, the disease was almost always in his thoughts. At one point, the hypochondriacal Hitler was so sure he was dying of cancer that he stopped what he was doing and began to write out his will. That he might soon die of cancer, he said in 1932, made it all the more urgent for him to "finish the gigantic tasks" he had in mind.

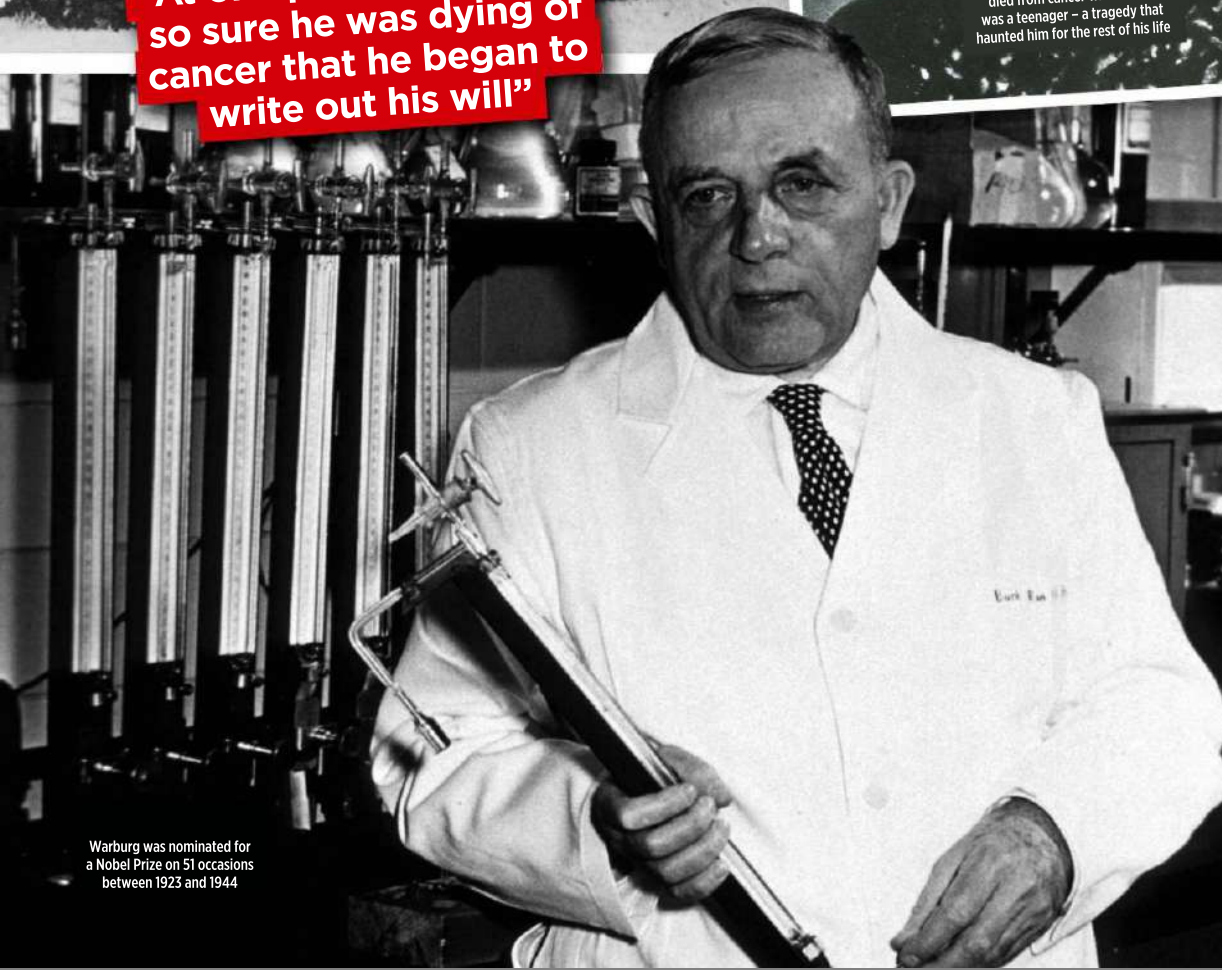
Hitler and other Nazi leaders embraced quackery of all kinds, but they had good reason to trust in the cancer research of Otto Warburg. Warburg's father, Emil, was a celebrated physicist who had worked with Albert Einstein; Otto had served in the German military during World War I and only returned home to Berlin after Einstein sent him a letter urging him to save himself for the sake of German science. Given these influences, it was natural for Otto Warburg to think about biology through the lens of energy. And so when he turned his attention to ▶



Hitler lays a wreath on the graves of his parents, Alois and Klara, in Leonding, Upper Austria, 1938

Hitler's mother Klara (née Pölzl) died from cancer while Adolf was a teenager – a tragedy that haunted him for the rest of his life

"At one point, Hitler was so sure he was dying of cancer that he began to write out his will"



Warburg was nominated for a Nobel Prize on 51 occasions between 1923 and 1944

Though he was renowned as a cancer researcher, it wasn't Warburg's only area of research – his work on photosynthesis was also transformative

"When Warburg learned he had won the Nobel Prize in 1931, his first response was, 'It's about time'"

Warburg once had the audacity to send Max Planck, a titan of German science (*pictured*), a memo that Nazi regulations should be revised on Warburg's own behalf

GETTY IMAGES X5, ALAMY X1

cancer in the early 1920s, Warburg wasn't interested in the mangled chromosomes of cancer cells or the theory that cancer was caused by microbes. He wanted to understand how cancer cells derived the energy to support their rapid growth.

What Warburg found would revolutionise cancer research in the following decades. Cancer cells, it turned out, do not eat glucose (blood sugar) like other cells. While healthy cells derive most of their energy by burning nutrients with oxygen, cancer cells generate much of their energy without oxygen, through the process we know as fermentation. It's the same biochemical process that, when carried out by microorganisms, gives us so many of our favourite foods – from beer and wine (alcoholic fermentation), to cheese and yoghurt (lactic acid fermentation).

It was already known at the time that human cells could ferment glucose. It was thought to be an act of last resort, though, a backup generator when there was not enough oxygen to run a cell's power stations, the mitochondria. But the cancer cells in Warburg's glass vessel didn't seem to care how much oxygen was available. They were ravenous for glucose and they fermented it, Warburg wrote, like "wildly proliferating torula yeasts".

UNDER NAZI PROTECTION

Cancer wasn't Warburg's only area of interest – he also revolutionised the fields of photosynthesis and cellular respiration – but it would remain central to his research until the very end of his life. It wasn't that Warburg was a great humanitarian, either. On the contrary, he was famously arrogant and narcissistic. When he learned he had won the Nobel Prize in 1931, Warburg's first response was, "It's about time." It was this tremendous self-regard that made him such a unique character in Nazi Germany. Warburg refused to leave Germany in the first half of the 1930s when he still had the chance, in part because he couldn't stand the thought of the Nazis telling him what to do.

Warburg repeatedly pushed back against the Nazis in the first years under their rule. He banned his employees from making the Nazi salute or hanging the Nazi flag at his institute. On one occasion, a company of storm troopers arrived at Warburg's institute and ordered his assistants to leave for the day to take part

Warburg (*left*) at a meeting of Nobel Prize winners in 1966. He is seated with Servo Ochoa, joint winner of the 1959 Nobel Prize in Physiology or Medicine

in a mandatory Nazi march. Warburg declared that he "would burn his institute" before following the command. The storm troopers left without Warburg's assistants.

In 1934, Warburg sent a memo to Max Planck, a grandee of German science, suggesting that Nazi regulations needed to be rewritten to exempt someone in Warburg's position. Warburg even suggested the specific language for the revised regulations.

Warburg, to be sure, was in a better position than most Jewish scientists in Nazi Germany. His institute was supported by the Rockefeller Foundation, and he had influential friends who repeatedly came to his aid when he got into trouble. But Warburg was convinced that it was Hitler's fear of cancer that ultimately saved him, and he was likely correct. After Brack told Warburg that he could remain at his institute, the Nazis went out of their way to protect the scientist, even allowing him to relocate to a country mansion when bombs began to fall near his institute in the Berlin neighbourhood of Dahlem.

SCIENTIFIC SUSPICION

After the war, Warburg's story would take another surprising turn: his groundbreaking research on how cancer cells fuel their growth was almost entirely ignored, as cancer scientists turned their attention to DNA and genetic mutations. It didn't help that many western scientists were suspicious of how Warburg had managed so well in Nazi Germany, nor that Warburg was making more and more outrageous statements about cancer. In December, 1950, Warburg told a gathering of Nobel laureates that the cancer cell's transition to fermentation was caused by an inability to use oxygen properly. Warburg then added that it was the only thing his fellow Nobel laureates needed to know about the biology of cancer. All the rest, he declared, was "garbage".

Warburg died in 1970. By the start of the 21st century, his name was no longer included in popular cancer textbooks. But, even after his death, Warburg's story would see new plot twists. In the late 1990s, a small number of cancer researchers found that their search for cancer genes had led them directly back to Otto Warburg and the energy processes he had studied. The past decade, in particular, has seen a renaissance in the study of the metabolism of cancer cells. Though contemporary researchers don't necessarily agree with all of Warburg's ideas, they do tend to agree with Warburg's larger arguments: that cancer is a metabolic disease as much as a genetic disease and that the way a cell takes up and processes food is fundamental to what the disease is and how it originates.

Today, the study of cancer metabolism is leading to new drugs and also to a rethinking of how our diets contribute to cancer. Warburg's unlikely survival story, it seems, may yet have a few more chapters.

GET HOOKED

LISTEN

BBC RADIO 4

An episode of *Archive on 4*, presented by David Edmonds, reveals how five Jewish scientists created a new field of science – social psychology – in the wake of the Holocaust: *bbc.co.uk/programmes/m000drbx*

SAM APPLE is an author and journalist. His book, ***Ravenous: Otto Warburg, the Nazis, and the Search for the Cancer-Diet Connection*** (Liveright) will be available in the UK from 25 June

THREE OTHER NOTABLE GERMAN SCIENTISTS OF JEWISH HERITAGE

HANS KREBS

The Jewish Nobel Prize-winning metabolism researcher who trained by Warburg's side, Krebs was fired from the University of Freiburg after the Nazis assumed power in 1933. Krebs fled to England with the tools Warburg had devised to study metabolism. Just a few years later, he used those tools to discover the famed Krebs cycle, and revolutionised our understanding of metabolism.

OTTO MEYERHOF

A friend and research collaborator of Warburg, Otto Meyerhof shared the 1922 Nobel Prize for Physiology or Medicine with British physiologist AV Hill. Meyerhof was yet another brilliant Jewish scientist who found his life in jeopardy under the Nazis. In 1938, Meyerhof escaped Germany for France. When the Nazis invaded France, he made a dangerous trek across the Pyrenees to avoid capture.

FRITZ HABER

The Nobel laureate and famed architect of Germany's gas warfare programme during World War I, Haber had his own institute in Dahlem, not far from Warburg's. After leaving Germany in 1933, the Jewish-born Haber remained mystified. "I never did anything, never even said a single word, that could warrant making me an enemy of those now ruling Germany," he wrote to a colleague in December 1933.

10 COLLECTIVE NOUNS FROM THE MIDDLE AGES

From a 'pride of lions' to a 'misbelief of painters', many of the terms we use today have roots in the distant past – specifically, the medieval period. **Chloe Rhodes** looks at the origins of 10 collective nouns that have survived to become a curious feature of modern language

Why are geese in a gaggle? And are crows really murderous? Collective nouns are one of the most charming oddities of the English language, often with seemingly bizarre connections to the groups they identify. But have you ever stopped to wonder where these peculiar terms actually came from?

Many of them were first recorded in the 15th century in publications known as Books of Courtesy – manuals on the various aspects of noble living, designed to prevent young aristocrats from embarrassing themselves by saying the wrong thing at court.

The earliest of these documents to survive to the present day is *The Egerton Manuscript*, dating from around 1450, which features a list of 106 collective nouns. Several other manuscripts followed, the most influential of which appeared in 1486 in *The Book of St Albans* – a treatise on hunting, hawking and heraldry, written mostly in verse and attributed to the nun Dame Juliana Barnes (sometimes written Berners), prioress of the Priory of St Mary of Sopwell, near St Albans in Hertfordshire.

This list features 164 collective nouns, beginning with those describing the 'beasts of the chase', but extending to include a wide range of animals and birds and, intriguingly, an extensive array of human professions and types of person.

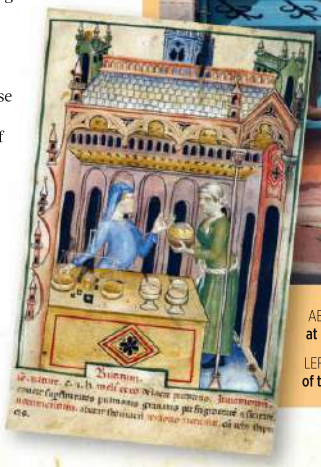
Those describing animals and birds have diverse sources of inspiration. Some are named for the characteristic behaviour of the animals ('a leap of leopards', 'a busyness of ferrets'), or by the use they were put to by humans ('a yoke of oxen', 'a burden of mules'). Sometimes they're given group nouns that describe their young ('a covert of coots', 'a kindle of kittens'), and others by the way they respond when flushed ('a sord of mallards', 'a rout of wolves').

Many of those describing people and professions go further still in revealing the mindset of their inventors, opening a window into the past from which we can enjoy a fascinating view of the medieval world.

1 A TABERNACLE OF BAKERS

Bread was the mainstay of a medieval peasant's diet, with meat, fish and dairy produce too expensive to be eaten any more than once or twice a week. Strict laws governing the distribution of bread stated that no baker was allowed to sell his bread from beside his own oven, and must instead purvey his produce from a stall at one of the king's approved markets.

These small, portable shops were known in Middle English as 'tabernacula', which were defined by Dutch lexicographer Hadrianus Junius in his *Nomenclator*, which was first translated into English in 1585, as 'little shops made of boards'.



ABOVE: **Medieval bakers were only allowed to sell their bread at markets that had been formally licensed by the Crown**

LEFT: **As a relatively inexpensive food item, bread was a staple of the medieval diet**

GETTY IMAGES X4, ALAMY X2

2 A STALK OF FORESTERS

The role of a forester in medieval society was respectable and well paid. Poet and author Geoffrey Chaucer held the position of deputy forester in the royal forest of North Petherton in Somerset, and records from the 1390s show that he was granted a generous annuity by King Richard II.

A forester's duties included protecting the forest's stock of game birds, deer and other animals from poachers. From time to time they also stalked criminals, who sometimes took to the forests to evade capture.

Wealthy landowners often hired foresters to ensure that poachers did not kill their stocks of game animals

DID YOU KNOW?

CHOPPING MAD

During the 11th century, the Domesday Book recorded that woodland covered about 15 per cent of England. By the 13th century, this figure had dropped to four per cent – a tiny proportion of the 50–60 per cent covered by trees in 3000 BC.

3 A MELODY OF HARPERS

Depicted in wall paintings in ancient Egyptian tombs, the harp is one of the oldest musical instruments in the world, and by the medieval period – the age of troubadours and minstrels – it was experiencing a surge in popularity.

This was an era defined by its emphasis on knightly tradition, and the harp often accompanied songs about valiant deeds and courtly love. In great demand at the estates of the upper classes, travelling harpers often moved from town to town performing instrumental accompaniment at banquets and recitals of madrigal singing. There were high-born harpers, too: both Henry VIII and Anne Boleyn were keen players.

Henry VIII was a keen harper, as shown in this image from his own illuminated psalter

4 A SENTENCE OF JUDGES

Up until the 12th century, the law was deeply rooted in the feudal system, whereby the lord of the manor could charge and punish perpetrators of crime – often poaching from his land – as he saw fit. But in 1166, Henry II sought to shift this power away from individual landowners and bring it more directly under his own control.

He established the courts of assize, where a national bench of judges travelled around the country attending quarterly court sessions. These judges based their decisions on a new set of national laws that were common to all people, which is where we get the term 'common law'.

Though more egalitarian than the manorial system, assizes judges could be harsh in the sentences they delivered, which ranged from a brief stint in the stocks to public execution.

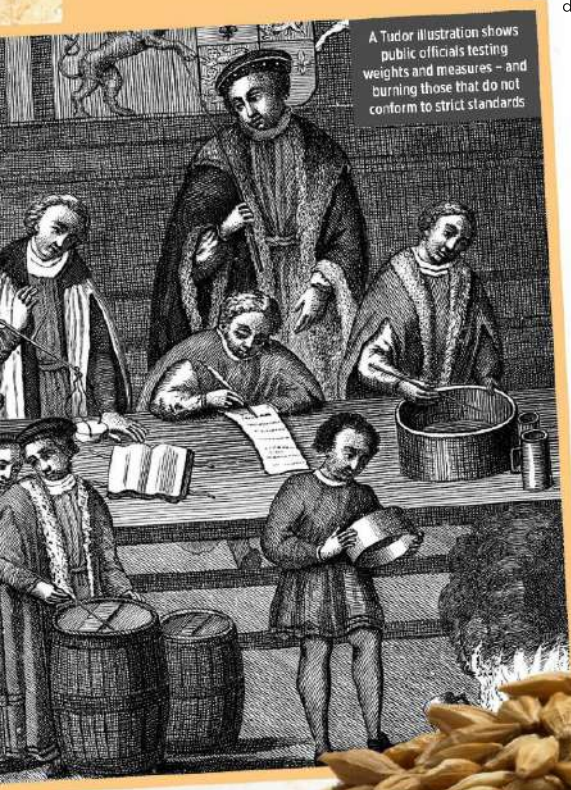
Judges could force local miscreants to spend time in the stocks as a form of punishment and humiliation

5 A FAITH OF MERCHANTS

Merchants lived outside the rigid structure of feudalism, and their growing success in the 15th century had an enormous impact on the structure of society. They formed guilds of fellow traders, which eventually bought charters directly from the king, allowing the towns to become independent of the lord of the manor.

'Faith', as it is used here, was a reference to the trustworthiness of a person, and is meant ironically, since merchants were rarely trusted. Court documents from the time record the various tricks of the trade that were used to con the public, including hiding bad grain under good, and stitching undersized coal sacks to disguise small measures of coal.

All offences were officially punishable by a stint in the pillory, but because the guilds were self-regulated, most perpetrators got off with only a fine – to the anger of the masses.



A Tudor illustration shows public officials testing weights and measures – and burning those that do not conform to strict standards

6 AN ABOMINABLE SIGHT OF MONKS

It's safe to say that monks weren't particularly popular during the Middle Ages. Bede's *Life of Cuthbert*, dated around AD 721, is the story of a party of monks who almost drown when their boat is caught in a storm on the river Tyne. In the story, Cuthbert pleads with peasants on the bank for help but "the rustics, turning on him with angry minds and angry mouths, exclaimed, 'Nobody shall pray for them: May God spare none of them! For they have taken away from men the ancient rites and customs, and how the new ones are to be attended to, nobody knows.'"

By the 15th century this resentment of the trampling of pagan traditions had been exacerbated by an overall perception of monks as being well-fed and comfortable while the general population starved. 'Abominable' is defined by the Oxford English Dictionary as causing moral revulsion, which is a fairly accurate description of the reaction this image provoked.

The Venerable Bede wrote about the popular dislike of monks among ordinary English people

It was common for unmarried noblewomen to be consigned to a nunnery by their families

A reference to a 'superfluity of nuns' appears in the 15th-century *Book of St Albans*

7 A SUPERFLUITY OF NUNS

Superfluity can be interpreted in two ways – the first is as historical fact. There were around 138 nunneries in England between 1270 and 1535, many of which were overcrowded. The convent was seen as a natural step for daughters of the nobility who had passed marriageable age, and lords put pressure on prioresses to accept their daughters even if they were already full.

Alternatively, though, the excess of nuns referred to here could have been a comment on the emerging view among agitators for church reform that the days of the monastery and convent were over. Some 50 years after this noun appeared in *The Book of St Albans*, Henry VIII ordered their closure, and the Reformation was in full swing.

8 A STUD OF HORSES

Horses were at the absolute centre of life in the Middle Ages. Rather than the breeds we're familiar with today, medieval horses were classified by the role they played in society. There were destriers, stallions that were used as warhorses by royalty and lords; palfreys, bred for general-purpose riding and travel, usually owned by the wealthy; coursers, fast cavalry horses; and rouncies, common-grade hack horses of no special breeding.

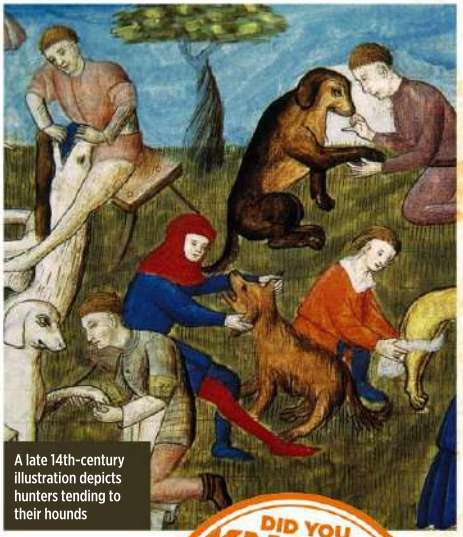
During the medieval period, monasteries often ran breeding centres called stud farms – 'stud' has its roots in the German word 'Stute', meaning mare. State-run stud farms also existed: the first was established under Louis XIV of France in 1665, by which time 'a stud of horses' was established as the proper collective.

Medieval horses were classified according to the role they played in society, rather than by breed

9 A PACK/CRY/KENNEL OF HOUNDS

Hunting dogs were important members of the medieval household. Every noble family kept kennels for their dogs, and these were looked after by a team of dedicated servants.

'A cry of hounds' is thought to derive from the hunting cry that instructs the hounds in their pursuit. The traditional English hunting call 'Tally Ho!' is a shortening of 'Tallio, hoix, hark, forward,' which, according to an 1801 edition of *The Sporting Magazine*, is an Anglicised version of the French terms 'Thia-hilaud' and 'a qui forheur', which appear in the book *La Vénerie* by Jacques du Fouilloux, first published at Poitiers in 1561. The book was subsequently adapted into English by George Gascoigne under the title *The Noble Arte of Venerie or Hunting*, and became one of the pillars of a young gentleman's hunting education.



A late 14th-century illustration depicts hunters tending to their hounds

10 A RICHESSE OF MARTENS

The European pine marten was considered a top prize for hunters in the Middle Ages. Of all the 'vermin of the chase', which included foxes, wild cats, polecats and squirrels, the marten was the most sought after because of its valuable pelt.

Tudor 'statutes of apparel' – strict laws governing the amount of money people could spend on clothing – dictated the colours, cuts and materials that could be worn by each level of society, and stated which furs could be worn by which tier of the aristocracy. Only those of or above the rank of duke, marquise and earl were allowed to wear sable fur, while ermine, the white winter coat of the stoat, which could only be obtained for a few months of the year, was reserved for royalty.

The pelts of pine martens (*right*) were highly prized, but ermine was reserved for royals such as Richard II (*left*)

DID YOU KNOW?

ANNE'S BEST FRIEND

Anne Boleyn was given a lapdog originally obtained by Lady Lisle, wife of the Lord Deputy of Calais, which she named Purkoy (Old French for 'Why?') on account of its quizzical expression. Sadly, it died falling from a great height, deeply upsetting the queen.

CHLOE RHODES is a freelance writer and journalist whose work has appeared in *The Daily Telegraph*, *The Times* and *The Independent on Sunday*

GET HOOKED

READ

Chloe Rhodes, *An Unkindness of Ravens: A Book of Collective Nouns* (Michael O'Mara Books, 2014)

GETTY IMAGES X5, ALAMY X5

WHAT IF... THE VIKINGS NEVER SAILED OVERSEAS?

Jonny Wilkes talks to **Professor Judith Jesch** about how the Vikings left their mark on everything from politics, culture, exploration and language

What if the famed and feared seafaring folk of Scandinavia had simply decided to remain at home, coping with the harsh conditions and content with lives spent fishing? Perhaps they might have never mastered the art of shipbuilding, which allowed them to take to the open sea and navigate to lands beyond the horizon. Or they found another outlet for their proclivities to raid and pillage. There would have been no Viking Age.

The ramifications on world history are, simply, unknowable. From the raid on Lindisfarne in AD 793 – the event often cited as the start of the Viking Age – the movements of the people of Norway, Denmark and Sweden defined the early medieval world. They were not only the warriors of their bloodthirsty reputation, but ruled as kings, grew wealthy through trade, and became the greatest explorers of the age. Their influence touched all areas of life, from politics to town planning and culture to language, and can still be felt today.

Besides, a whole host of circumstances had to be different to prevent the Vikings from venturing overseas in the first place. "They needed not to have had previous contact with cultures around them, which gave them knowledge of opportunities there, and no wealthy and ostentatious upper class keen on gaining more wealth through plunder and trade," says Judith Jesch, professor of Viking studies at the University of Nottingham. "And they needed not to have been human, adventurous and curious, since migration and movement are pretty much constants in human history."

All of that depended, however, on the Vikings' skill for shipbuilding. Take that away and they may well have never attempted to sail over the sea to the English coast. As well as the effects on populations, culture, religion and language, the migration from Scandinavia helped bring the Anglo-Saxon kingdoms in England together against their common enemy. Alfred the Great's victory over the Great Heathen Army in AD 878 helped lay the foundations of the united England achieved by his grandson Athelstan in the AD 920s. With no Vikings, would unification have been hindered or come about sooner?

TERROR AND TRADE

"My hunch is probably neither. Processes of political unification and division on this island seem to be regular occurrences," explains Jesch. "The Vikings may have given one group an opportunity to influence these processes in a particular way, but without them other factors might have given different groups different opportunities. The long-term developments might not have changed."

Yet a clear change in English history would have been the absence of the Danelaw, the region colonised and controlled by the Danes where their culture took root and a line of Viking kings ruled, including the powerful Cnut of Northumbria. The other unions against Viking invaders that formed in Scotland, between the Picts and Scots, and Ireland, when Brian Boru rose to be High-King in 1002, would have also been lost or at least been much altered.

Across Europe, the Vikings made their presence known, both with attacks on cities like Paris and in trading. "They extended trade routes, notably linking places as diverse as the North Atlantic, the far north of Scandinavia, and the eastern routes through what is now Russia to Constantinople and further, as well as intense activities around the Baltic and North Sea," says Jesch. Trade would obviously have continued without the Vikings, but at a loss in variety of goods and geographical scope.

IN CONTEXT

The name 'Viking' refers to the waves of Scandinavians from modern-day Norway, Denmark and Sweden who sailed across the seas from the late-eighth century to 1066, and beyond. They neither called themselves by that name nor were they a distinct ethnic and social group, but the Viking Age changed the known world of the early medieval period.

Their voyages saw Scandinavian influence spread from the Byzantine empire in the east to across the Atlantic Ocean, where they discovered new territory such as Iceland, Greenland and North America.

The impact of the Vikings on the societies they encountered was monumental: they attacked and pillaged; established trading networks; transformed political systems and founded settlements. The English language also owes a significant debt to Old Norse.

The Vikings' superb shipbuilding skills allowed them to expand overseas trade – and carry out deadly raids

GETTY IMAGES X1, ALAMY X2

The Duchy of Normandy in northern France may not have come into being, too. The 'Land of the Northmen' was established in AD 911 and first ruled by a Viking named Rollo in the aftermath of his attacks on Paris and Chartres. This meant that the Norman Conquest of England in 1066 could be seen as a Viking invasion, so if there had been no Vikings then there may well have been no William the Conqueror and no battle of Hastings.

While that may be a more outlandish speculation, it is certainly true that the histories of Iceland and Greenland would diverge greatly without the Vikings there to discover them. The former was permanently settled around AD 874 by Norwegian voyager Ingólfr Arnarson, and the latter first reached a century later by Erik the Red. The two islands would have gone on waiting for another group of great explorers with sturdy seaworthy ships.

SPREADING WORDS

"The Viking diaspora is a major theme in medieval Icelandic literature: old sagas and poetry forming a body of literature that is remarkable for its size and quality for such a small nation. This literary development is unlikely to have happened," adds Jesch. In fact, the entire range of Viking art forms that were adopted and adapted would be lost, including the export of runic writing. Although, it must be remembered that without Viking raids on monasteries like Lindisfarne, many precious Anglo-Saxon artefacts and manuscripts would have likely survived.

Perhaps the Vikings' most enduring impact on the societies they met was language, the effect of which is global, says Jesch. The Scandinavian influence on English alone can still be seen today in many words "as well as many place names in Britain, Ireland and elsewhere, some of which were exported to America, Canada, Australia and New Zealand". If the Vikings had never sailed overseas, English, and other languages, would not look and sound the same. Thursday – or Thor's day – would not be Thursday for a start.

LISTEN

BBC RADIO 4 The Vikings' impact on the English language is explored in an episode of *Word of Mouth*: bbc.co.uk/programmes/m00074j4

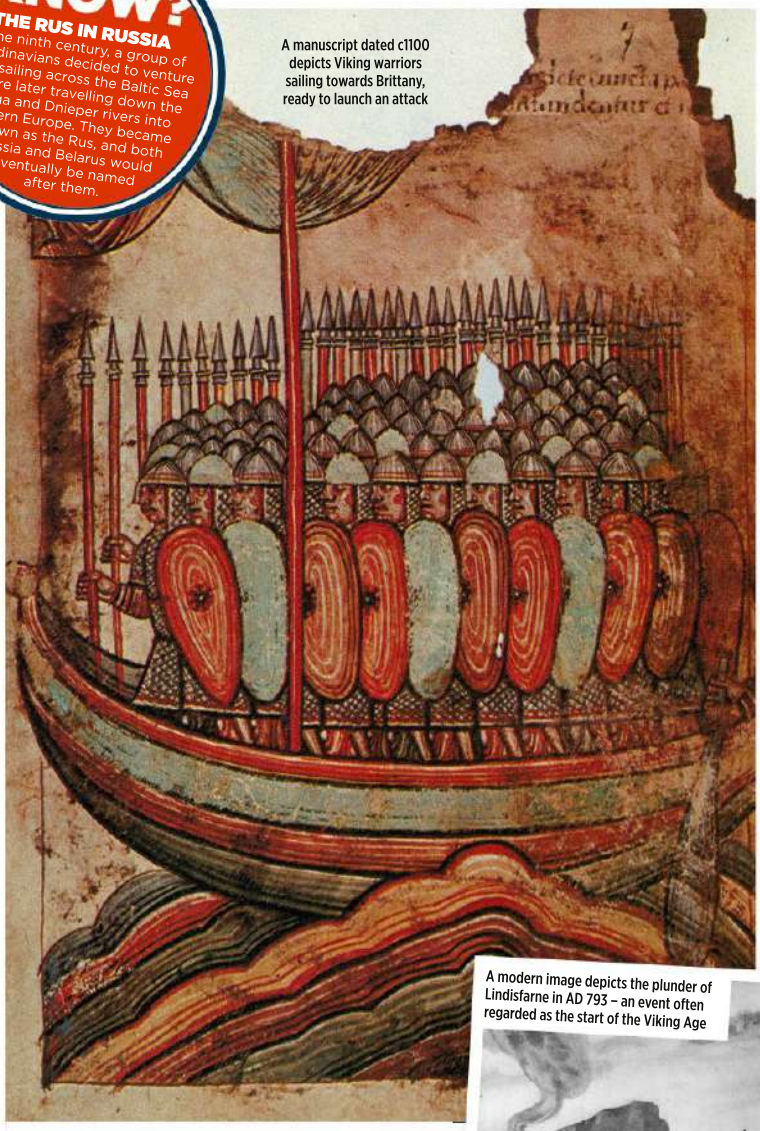
NEXT MONTH

What if... the Babington Plot of 1586 had succeeded?

DID YOU KNOW?

THE RUS IN RUSSIA

In the ninth century, a group of Scandinavians decided to venture east, sailing across the Baltic Sea before later travelling down the Volga and Dnieper rivers into Eastern Europe. They became known as the Rus, and both Russia and Belarus would eventually be named after them.



A manuscript dated c1100 depicts Viking warriors sailing towards Brittany, ready to launch an attack

"IF THERE HAD BEEN NO VIKINGS, THEN THERE MAY WELL HAVE BEEN NO WILLIAM THE CONQUEROR AND NO BATTLE OF HASTINGS"

A modern image depicts the plunder of Lindisfarne in AD 793 – an event often regarded as the start of the Viking Age

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333 TO 13

At the battle of Myeongnyang in 1597, the Korean admiral Yi Sun-sin was outnumbered by a Japanese fleet of 333 ships to his 13. He won a decisive victory.

LETTING OFF STEAM
The Belmond British Pullman train (*main*) hauls carriages once owned by the operator of the original Orient Express – giving passengers a taste of the same luxury advertised in the 1880s poster below

South Eastern Railway, London-Chatam-Dover Railway
Chemins de Fer du Nord & de L'Est de France
LONDRES PARIS CONSTANTINOPLE
PARIS MUNICH VIENNE BUDAPEST BELGRADE A CONSTANTINOPLE
PARIS à BUKAREST
ORIENT EXPRESS

How long did the Orient Express operate?

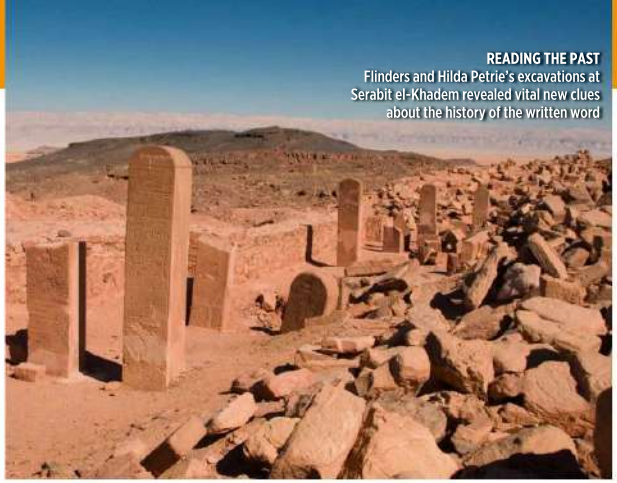
SHORT ANSWER Travellers enjoyed the train service for more than a century – and yes, there really was a murder

LONG ANSWER By the time Agatha Christie penned her murder mystery classic based on the luxury train route from Istanbul to Paris, the real service was already half a century old. It was the brainchild of Belgian businessman Georges Nagelmackers after he toured the US in train pioneer George Pullman's sleeper cars and established, in 1872, the Compagnie Internationale des Wagons-Lits.

The Orient Express, the pinnacle of his ambitions for long-distance, high-luxury train travel in Europe, had its maiden journey 11 years later. In October 1883, it set off from Paris and took 13 days to cover the 1,700-plus miles to Istanbul (then Constantinople). Well, almost. The end of journey was via steamship, as the remaining section of railway line still hadn't been completed.

The 'king of trains, train of kings' operated (in differing forms, routes and names) until December 2009, although it had stopped going as far as Istanbul by 1977. And during that lengthy run, there really was a murder on the Orient Express – and only a year after Christie's famous book was published. Maria Farcasanu, the director of a fashion school in Bucharest, was robbed of her belongings and pushed out of a moving carriage in 1935. The culprit, Karl Strasser, was caught – but not by a moustachioed private detective.

GETTY IMAGES X2



READING THE PAST
Flinders and Hilda Petrie's excavations at Serabit el-Khadem revealed vital new clues about the history of the written word

Who created the first alphabet?

SHORT ANSWER Ancient graffiti left by a group of lowly miners changed the written word forever

LONG ANSWER When Egyptologist pair Flinders and Hilda Petrie undertook archaeological excavations in an ancient turquoise mine in the Sinai Desert of Egypt in 1905, they found an intriguing piece of the puzzle in the history of the written word.

Some 3,800 years ago, migrant miners at Serabit el-Khadem had carved on the walls strange shapes, which, on closer inspection, incorporated hieroglyphics with their own language – the resulting set of simplified patterns represented individual sounds. These allowed them to write out names and dedications to the gods.

Hieroglyphics and cuneiform long pre-dated the inscriptions discovered by the Petries, but they comprised symbols, either pictograms or wedges, as words or sounds – not an alphabet. The so-called Proto-Sinaitic Alphabet at Serabit is now considered the earliest-known in the world, from which the letters you're reading now were spawned. Not bad given that it's possible those miners were previously illiterate.

Why did Puritans have buckles on their hats?

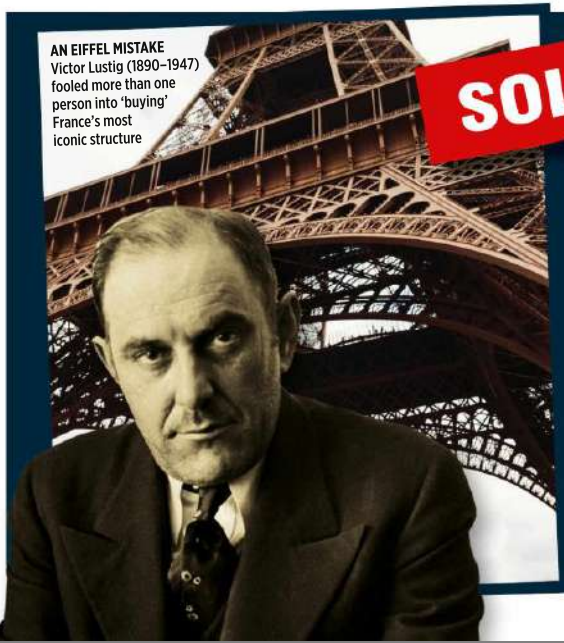
SHORT ANSWER The really short answer is that they didn't

LONG ANSWER The image of a Puritan in the New World in austere black costume and buckles on their hats and shoes doesn't tell the full sartorial story. Inventories of people's belongings after their deaths show that they owned clothes of all shades. Puritans did wear those tall conical hats (named *capotains*), but buckles didn't come into fashion until the late 17th century, decades after the Pilgrims left England.

It seems that when later Puritans were seen in their Sunday best with a buckle or two, the look was retroactively allocated to those in the New World. They certainly wouldn't have spent their money on expensive buckles for their belts let alone their hats, rather trusting in leather lace to keep their puritanical trousers from falling down.

13
The number of European wild rabbits imported by farmer Thomas Austin to bunny-free Australia in 1859. Within a decade, the population was well over 20 million.

TIGHT FIT
Buckles didn't come into fashion until the late 1600s – long after the Puritans left English shores



AN EIFFEL MISTAKE
Victor Lustig (1890–1947) fooled more than one person into 'buying' France's most iconic structure

GETTY IMAGES X4, ALAMY X3

SOLD

Who was Victor Lustig?

SHORT ANSWER A con artist so good that he sold the Eiffel Tower... twice

LONG ANSWER Victor Lustig was an Austro-Hungarian Count, or that's what he wanted people to think. The truth: he was a con artist of supreme skill and audacity, like all of Ocean's Eleven wrapped into one. He made his name swindling wealthy people on cruise ships out of investments in his non-existent Broadway show, but that was small pickings compared to his 1925 con: selling the Eiffel Tower.

Posing as a French official, he convinced a scrap dealer that the tower, 30-plus years old and in need of repairs, was about to be ripped down so the metal could be bought up. When that worked, Lustig thought 'Why not do it again?' He 'sold' the Eiffel Tower to another dealer.

Fleeing to the US, he kept conning, including squeezing Al Capone for four figures and flogging a box he claimed could duplicate money, until finally being caught for good in 1935.

COLT FIGURE
Scores of tourists visit White Horse Hill each year to get a closer glimpse of the carving

Who made the Uffington White Horse?

SHORT ANSWER Either the identity of the original artists has been lost, or they were the Bronze Age Banksy

LONG ANSWER Most of the giant white horse geoglyphs seen galloping across various hills in England – half in chalky Wiltshire alone – are a few hundred years old at most. But there is one in the herd that is much, much older. The Uffington White Horse has been visible on the obviously named White Horse Hill in the Berkshire Downs for around 3,000 years.

Measuring 110 metres long and 40 metres high, the horse was carved in the late Bronze or early Iron Age by removing the turf to reveal the bone-white chalk underneath. A tradition of 'scouring' to clear the vegetation and replace the top layer of faded chalk used to be carried out by local people once every seven years, but these days it's the National Trust's responsibility to keep the horse looking its very best.

Despite being a much-loved landmark, the provenance and purpose of the horse remain unknown. So unfortunately, the answer to this question is a rather disappointing 'we don't know yet'. It may represent a Celtic goddess or could have been used to worship a Sun god. In fact, it may not even be a horse at all, as one theory suggests it could depict a dragon – the one slain by a certain St George, no less.

DID YOU KNOW?

MOTHER KNOWS BEST
When the Tennessee House of Representatives met to ratify the US 19th Amendment, giving women the vote, member Harry Burn received a letter from his mother telling him to "be a good boy" and "vote for suffrage". He did.

PEPSI EX-LAX
After North Carolina druggist Caleb Bradham created a new fizzy cola in the 1890s, he chose the name 'Brad's Drink' before changing it to 'Pepsi-Cola', as he wanted to stress how good it would be for indigestion – or dyspepsia.

BREAST INTENTIONS
Agnès Sorel, mistress to Charles VII of France, did not shy away from scandal at court, often supposedly wearing dresses that exposed one of her breasts. She also posed for a painting as the Virgin Mary – again, with a breast showing.

TOUCH OF SPICE
As nutmeg was expensive in 18th-century Europe, the wealthy would carry a small supply of the spice and a personal grater with them so they could add it to nearly everything they ate, and do it publicly to flaunt their status at the same time.

Did people really believe lambs grew on trees?

SHORT ANSWER Yes, presumably much to the bemusement of farmers tending their flocks

LONG ANSWER The denizens of medieval Europe knew very little about the wider world, so could be convinced of some barmy notions. Thanks to accounts like the 14th-century work, *The Travels of Sir John Mandeville* – a fantastical travelogue readily taken as fact – there were plenty who believed there was a type of plant that grew living lambs.

The Vegetable Lamb of Tartary was found in central Asia, with the lamb hovering above the ground on a stalk and eating everything around the plant until it perished. According to those who 'caught' one, the lamb tasted like fish and had blood as sweet as honey. But even though references to this specimen (which may have just been cotton with its white fluffy balls) go back to the fifth century BC, no one presented one as proof. Funny that. Still, belief in the Vegetable Lamb of Tartary persisted until the 17th century.

EWE MUST BE JOKING
An artist's impression of the so-called Vegetable Lamb of Tartary

Did Elvis shoot his TV?

SHORT ANSWER Elvis was King of Rock 'n' Roll and Lock 'n' Load

LONG ANSWER According to one story, Elvis Presley so thoroughly disliked the singer Robert Goulet that he couldn't help but pick up one of his many guns whenever he saw him on TV. This hatred may have been borne out of Elvis' belief that Goulet didn't sing with enough feeling, or from Goulet's butchered rendition of 'The Star-Spangled Banner' before a fight between Muhammad Ali and Sonny Liston. Or was it down to Elvis believing that Goulet once tried to steal his girlfriend? Or does none of this add up? It's probable that the two were actually friends and the King of Rock 'n' Roll just REALLY liked shooting things.

COLD WAR
After being used as a German prison, Castle Itter went on to stage one of WWII's most unlikely clashes

What was the battle of Castle Itter?

SHORT ANSWER The strangest battle of World War II, when foes became allies

LONG ANSWER Throughout most of World War II, Castle Itter in the Austrian Alps had been a German detention facility for high-profile prisoners. But in the final days of fighting, with Hitler dead, the castle guards abandoned their posts. Loyal members of the SS and the Gestapo still patrolled the area, however, so the inmates sent a messenger out to get help from the advancing Americans.

Contact was eventually made with US tank commander Captain Jack C Lee, but also a band of German soldiers who had turned on the Nazi cause, led by Major Josef Gangl. They both answered the prisoners' call and led a joint rescue mission to the castle, where they were joined by disillusioned Waffen-SS officer, Kurt Siegfried-Schrader. With Americans and Germans standing side by side, they held off a fierce assault by the Waffen-SS on 5 May 1945.

Gangl, a decorated Wehrmacht officer, ended up giving his life to protect his former enemies.

5,398

The number of artefacts found inside the tomb of Tutankhamun. It took Howard Carter and his team years to catalogue everything.

When was *The Daily Mirror* launched?

SHORT ANSWER A new century saw a new paper for women – but the mirror cracked

LONG ANSWER Alfred Harmsworth – later Viscount Northcliffe – had launched the *Daily Mail* in 1896 with great success, so understandably felt confident about his idea for another newspaper. This exciting new venture would be a paper for women, run by women, and thus "a mirror of feminine life".

The Daily Mirror launched on 2 November 1903 with an editorial by Harmsworth stressing that the paper would feature "women's interest, women's thought, women's work". Yet despite a huge marketing campaign, the *Mirror* struggled to find an enthusiastic audience among the women of Britain. Within a year, a new (male) editor had been appointed and all the women working as journalists were fired. The updated masthead, just to make the changes abundantly clear, read: "A paper for men and women."

A PRESSING MATTER
Alfred Harmsworth changed his plans for the *Mirror* soon after its first edition (*inset*)

What was the Gordion Knot?

SHORT ANSWER Alexander the Great cut right to the heart of this mythical puzzle with a twist

LONG ANSWER The Gordion Knot was the Mount Everest of knot tying: a strap twisted and turned into such a tangle that it was impossible to see where it began and ended. It was used to tether a legendary chariot belonging to an ancient king of the city of Gordium (in modern-day Turkey) to a pole outside the palace and destined to be untied only by a great ruler.

In fact, an oracle said that anyone who loosened the knot would rule all of Asia. That made too tempting a challenge for the uber-confident empire builder, Alexander the Great.

After conquering the region in 333 BC, he was shown the chariot and, according to myth, successfully loosened the Gordion Knot. The details of how he managed the feat differ, though. The most-retold account is that Alexander didn't waste time trying to untie it, but simply drew his sword and cut through it.

CUTSCENE
An 18th-century painting depicts Alexander the Great preparing to hack through the Gordion Knot with his sword

GETTY IMAGES X3, ALAMY X3, LAZARUS PROJECT/UNIVERSITY OF ROCHESTER DIGITAL SCHOLARSHIP LAB X1

STAND AND DELIVER
The Pledge of Allegiance has undergone several controversial alterations since it was first recited in American classrooms

Who wrote the Pledge of Allegiance?

SHORT ANSWER It was composed by a Baptist minister, but it wasn't him who added the bit about God

LONG ANSWER Children in US schools start their day, hand over their heart, reciting 31 familiar words: "I pledge allegiance to the flag of the United States of America and to the republic for which it stands; one nation under God, indivisible, with liberty and justice for all."

Officially adopted by Congress in 1942, the Pledge of Allegiance was written 50 years earlier. Francis Bellamy, a socialist Baptist minister working as the assistant editor for a popular children's magazine, *The Youth's Companion*, was tasked with composing a rousing patriotic pledge. First published on 8 September 1892, it would be used in the celebrations planned for the 400th anniversary of Christopher Columbus' arrival in the New World.

Bellamy's original, recited by millions of youngsters that year, had a different wording, saying "my flag" – the country was added in the 1920s to make it clear to immigrants exactly which flag they were pledging to – and not containing "under God". That religious addition came in the 1950s and has caused controversy ever since.

Another controversy was that the Pledge used to be accompanied with a straight-armed gesture, the Bellamy Salute, which had to be changed when people realised a similar salute was being used in Nazi Germany.

Did maps say 'here be dragons'?

SHORT ANSWER Maps, no. A single copper globe, yes

LONG ANSWER At a time when ships sailed into uncharted waters, maps were littered with all kinds of strange monsters at the edges. But those distinctive words – 'here be dragons' – did not appear on any of them. The more likely phrase would be 'here be lions'. Instead, the ubiquitous phrase can only be found on a single globe. Although just 4.4 inches high, the Hunt-Lenox Globe (*pictured*), made of copper in the 16th century, has a number of annotations, including the Latin words "Hic sunt dracones" as a warning on the east coast of Asia.

BEASTS IN THE EAST
The tiny Hunt-Lenox Globe warns users of "dracones" in Asia

When did we start saying 'dude'?

SHORT ANSWER Not as recently as you may think, and originally about a different type of 'dude'

LONG ANSWER What type of person do you think of when you hear 'dude'? A surfer, skateboarder, or Jeff Bridges' 'The Dude' from *The Big Lebowski*? All are acceptable, but wholly different from the origins of the word.

In the 1880s, 'dude' became a moniker for a dandy in the US; young men waltzing around towns in ostentatious fashions. It is thought to come from the song 'Yankee Doodle', all about a dandy riding off to town with a feather in his hat – which makes sense as 'dude' is there in the title.

The Aesthetic Movement was all about looking good – 'art for art's sake' was the creed – encapsulated by men like New York socialite Evander Berry Wall (*pictured*). He once changed clothes 40 times in a day and is credited as the first in the US to attend a ball in a tuxedo. No wonder he was proclaimed 'king of the dudes'.

SHARP DRESSED MAN
Socialite Evander Berry Wall (1861–1940) was the quintessential US 'dude'

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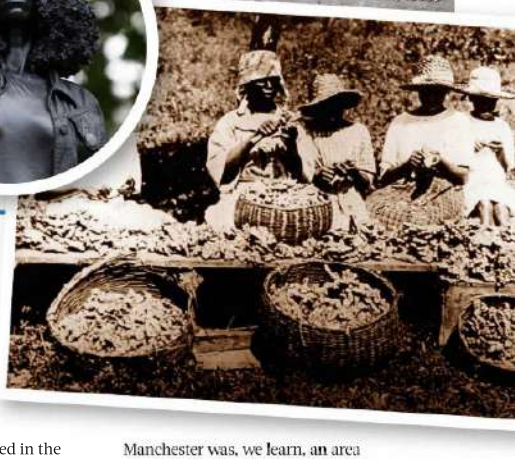
GETTY IMAGES

ONE TO WATCH

MAIN: The defaced statue of slave trader Edward Colston was dumped in Bristol Harbour in June 2020

BELOW: Women peeling ginger in Manchester Parish, Jamaica, in the early 1900s

INSET: A statue of protester Jen Reid briefly stood in Colston's place



Living history

Descendants / BBC Radio 4 & BBC Sounds, from Friday 28 May

Britain's past as a slave-trading nation plays into the present. This idea came into sharp focus in June 2020, when protesters pushed a statue of Edward Colston (1636–1721), later honoured by the Victorians as a philanthropist despite his involvement in the transatlantic slave trade, into Bristol Harbour. Temporarily, a statue of Bristolian Jen Reid, portrayed giving a Black Power salute, replaced Colston.

But resonance between the past and protest doesn't just centre on moments that take the headlines. There's a deeper story here, too, of how so many Britons can find, by going back just a few generations, connections to slavery, whether they are related to those who were enslaved, those who benefited from the trade in human misery, or both.

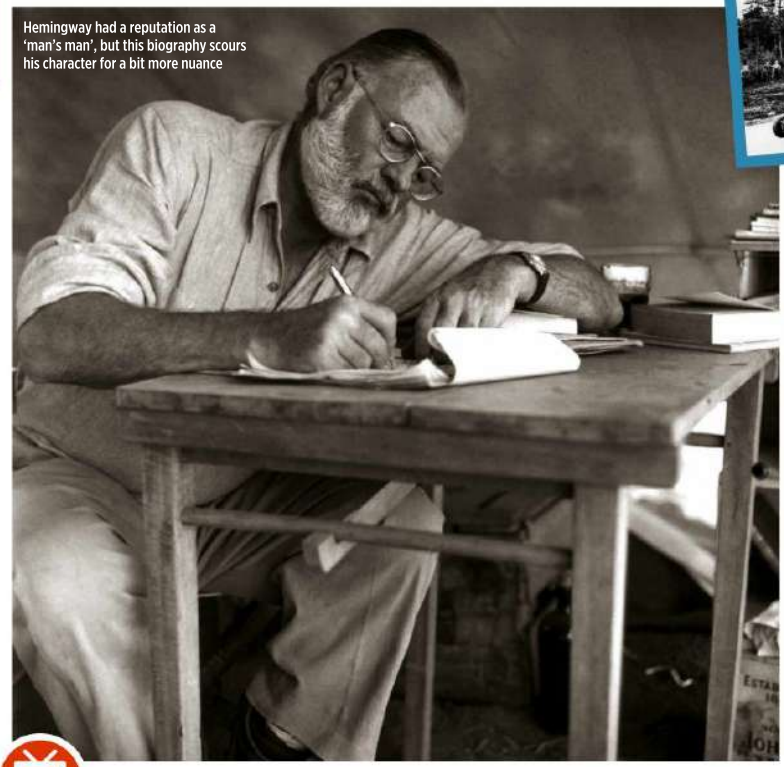
It's these connections that run through *Descendants*, narrated by poet and writer Yrsa Daley-Ward, and made with the support of University College London's Centre for the Study of the Legacies of British Slavery. The programmes' subjects are linked not just to slavery but to one another, often in surprising ways.

Jen Reid herself, whose father arrived in the UK as part of the Windrush generation, features in the first show, which follows the efforts of Reid and her father to learn more about their family history. Manchester Parish in Jamaica proves to be central to the story, a place where Reid's forebears lived for a century. But the further they go back into the plantation era, the more difficult it becomes to find information.

Manchester was, we learn, an area where the Heron family were influential. The focus of the show shifts and listeners are with Gayle Heron, sister of the late American poet and musician Gil Scott-Heron (1949–2011). Other figures who feature in the series include Conservative MP James Cleverly and Mark Cropper, who is descended from abolitionist James Cropper (1773–1840).

GETTY IMAGES X2, ALAMY X1

The V2 rocket was a forerunner of the long-range missile



Hemingway had a reputation as a 'man's man', but this biography scours his character for a bit more nuance

Contradictory figure

Hemingway / BBC Four, June

Ernest Hemingway (1899–1961) was a man whose life belied the idea that writers are quiet souls. An adventurer, a sportsman and a war correspondent, Hemingway married four times, drank to the point of alcoholism, and took his own life by shooting himself with a favourite shotgun – the culmination of a long history of mental health issues.

But look past his biography and his reputation as a hell-raising 'man's man', and who was Hemingway? This biography, co-directed by US filmmakers Ken Burns and Lynn Novick (*The Vietnam War*) eschews easy answers to give a nuanced picture of a complex and troubled man.

In part, it's a picture of a visionary artist, a Nobel laureate whose economic style was hugely influential. It was Hemingway's belief that if he selected the correct details, as a journalist would, the inner themes of his stories would be revealed to his readers without his having to address them directly.

But this is also a picture of Hemingway as a man who was keenly interested in the wider world and who was present during some of the key moments in 20th-century history, such as the Spanish Civil War (the basis for one of his masterpieces, *For Whom The Bell Tolls*) and the liberation of Paris in August 1944.

The insights of Hemingway's wives, including Martha Gellhorn (1908–98), widely regarded as one of the greatest war correspondents of her generation, are central to *Hemingway* – and arguably especially important considering Hemingway's justified reputation for misogynistic behaviour. Hollywood actors lending their talents in readings from journals and letters include Jeff Daniels, who voices Hemingway, and Meryl Streep as Gellhorn.

War correspondent Martha Gellhorn was one of Hemingway's wives

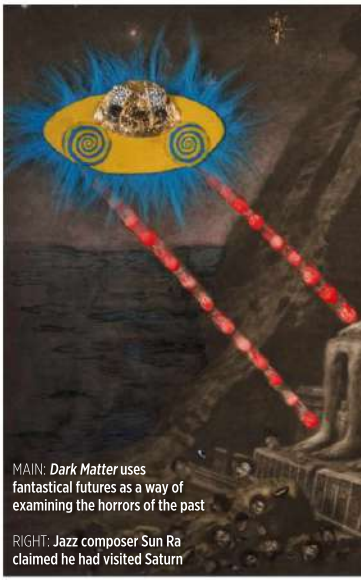
Grand Designs

Secret Nazi Bases / June, Yesterday & UKTV Play

As anyone who has ever seen Albert Speer's plans to transform Berlin into Germania can testify, the Nazis delighted in grandiose building schemes. They were also, as this returning series shows, methodical enough to bring many of their plans to fruition.

The first of eight episodes focuses on the Baltic Sea community of Peenemünde. In World War II this was a key location in the development and construction of V1 and V2 rockets.

Also in the first tranche of shows, cameras explore the Festungsfront Oder-Warthe-Bogen, a line of fortifications designed to protect eastern Germany. In the event, this was broken by the advancing Soviets in just three days in 1945 as the Nazi regime underwent its inexorable collapse. There's also a programme about a complex built deep in Poland's Owl Mountains between 1943 and 1945 – what was its precise purpose?



MAIN: *Dark Matter* uses fantastical futures as a way of examining the horrors of the past

RIGHT: Jazz composer Sun Ra claimed he had visited Saturn

GETTY IMAGES X4, ALAMY X2, © ELLEN GALLAGHER X1, ©JIM MCCRARY/REDFERNS/GETTY IMAGES X1

Cinematic revolution

Unreal: The VFX Revolution / BBC Radio 4, July

In 1975, in the unpromising environs of a cinder block warehouse in Los Angeles, Industrial Light & Magic was born. The company was the brainchild of film director George Lucas, who wanted to ensure that his forthcoming space opera, *Star Wars*, would feature visual effects never before seen on screen.

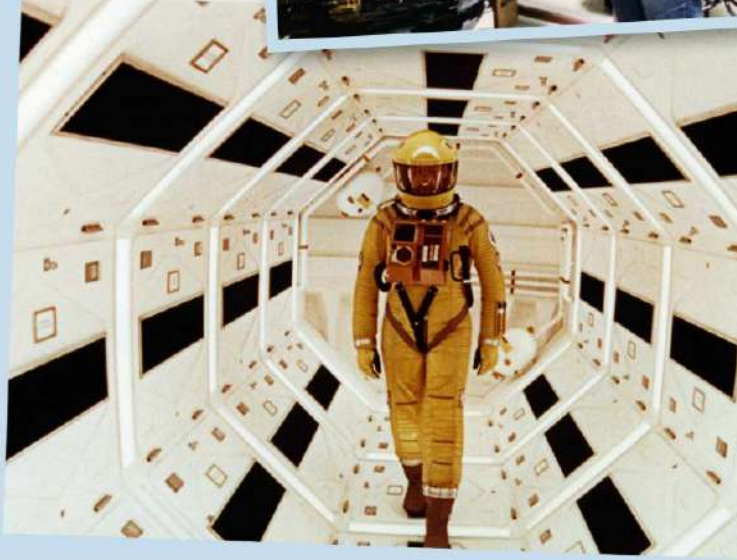
Incredibly, at least from a 21st-century perspective when blockbusters are so often built around elaborate set-piece slamdowns, this was a time when few in Hollywood thought visual effects to be especially important. The field was becoming moribund. Even the biggest films had adult themes and realism was the order of the day. But Lucas and his generation of movie-brat filmmakers, which included Steven Spielberg, would begin to change this.

It's a technological and cultural history laid out here in a three-part series presented by Paul Franklin, who won an Oscar for his work on the visual effects for Christopher Nolan's *Inception*, and which takes in, to choose just a few highlights, *2001: A Space Odyssey*, *Blade Runner*, *TRON*, *Terminator 2: Judgment Day* and *Avatar*.

Central to the story is the rise of computer-generated imagery (CGI), which has transformed movie-making. But this isn't an uncritical history. Underpinning the series is the idea that, as movie-makers go in search of the spectacular, something may have been lost along the way. In making the fantastical seamless and somehow 'realistic', do directors and producers sometimes forget about the power of images to disturb us and jolt us out of our everyday lives?

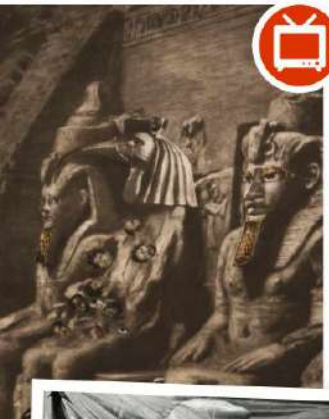
RIGHT: George Lucas looks at the Death Star from *Return of the Jedi*

MAIN: American actor Gary Lockwood on the set of *2001: A Space Odyssey*



Better tomorrows

Dark Matter: A History of the Afrofuture / BBC iPlayer, streaming now



If the idea that black history from the colonial era onwards has striking parallels with classic science-fiction seems counterintuitive, consider the following. Here is a story of people who were abducted by 'aliens', transported into slavery and collectively rebelled against their fate. It's these parallels that underpin Afrofuturism, in which black artists, musicians and writers project fantastical futures as a way to confront racism and the horrors of the past. It's an approach that encompasses, among others, visual artist Jean-Michel Basquiat (1960–88), Grace Jones, Parliament-Funkadelic leader George Clinton and writer Octavia Butler (1947–2006). These are major figures, whose work represents a rich cultural history explored in this one-off documentary.

Within this story, few figures have been more influential than jazz composer Sun Ra (1914–93), who claimed to have been teleported to Saturn. This is sometimes seen as evidence of Sun Ra's undoubted eccentricity, but there's a deeper truth here, too. Sun Ra's insistence that, to quote the title of his 1973 feature film, *Space Is the Place*, was also a satirical response to the alienation inherent in being black in the US.

Subterranean shelter

In Darkness / IMC Vision DVD, available now

Nominated for Best Foreign Language Film at the 2012 Academy Awards, the recently re-released *In Darkness* is a powerful Polish film that tells the story of Leopold Socha. A sewer inspector in Lwów, Socha (Robert Więckiewicz) used his knowledge of the city's waste system to hide a group of Jews who had escaped Lwów Ghetto during the Holocaust.

In 1978, Socha (who died in 1946 while saving his daughter from being hit by a Soviet truck) was recognised by Israel as Righteous Among the Nations.

MAIN: **An intricate Japanese *okimono* representing a trio of demons**

BELOW: **A simpler *netsuke*, carved in the shape of a horned demon mask**

Netsuke: Miniature Masterpieces from Japan

UNTIL JUNE 2022, BRISTOL MUSEUM & ART GALLERY

FREE ENTRY *bristolmuseums.org.uk*

A taste of Japanese culture is coming to Bristol via an exhibition dedicated to *netsuke* – miniature carvings often made of ivory and hardwood, originally designed as part of a solution to the lack of pockets in men's kimonos.

Mostly worn during the Edo period (1603–1868), *netsuke* functioned as toggles. If men wanted to carry small personal items around with them, they would hang them from cords, which would be tucked into sashes wrapped around their waist. The *netsuke* would then be attached to the upper ends of the cords, preventing the suspended items from slipping.

Netsuke use declined during the late 19th century as western clothing became more popular, so craftsmen turned their attention to making carvings that were worn purely for decorative purposes. Known as *okimono*, these were larger and more intricate than *netsuke*.

Bristol Museum & Art Gallery has an extensive collection of *netsuke* and *okimono*, with 75 on display in the museum's Eastern Art Gallery for the first time. The collection includes representations of boats, demons, and creatures such as octopuses and monkeys. There's even one of a man drinking sake, whose head wobbles when he is picked up – just as if he has had one tipple too many.

Entry to both Bristol Museum & Art Gallery and the *netsuke* exhibition is free, but a timed ticket must be booked in advance.

EM FITZGERALD, ANTHONY CHAPPEL ROSS, NATIONAL PORTRAIT GALLERY, BRISTOL CULTURE, TRACEY WHITEFOOT, IMPERIAL WAR MUSEUMS

During its 33 days in Normandy, HMS *Belfast* fired more than 5,000 shells

HMS Belfast reopens

OPEN FROM 8 JULY, LONDON

PAID ENTRY *iwm.org.uk/visits/hms-belfast*

Having been closed since March 2020 due to the ongoing coronavirus pandemic, HMS *Belfast* is reopening in July – just in time to celebrate its 50th anniversary of being moored on the River Thames.

The Royal Navy warship is Britain's most significant surviving vessel from World War II, being one of only three remaining in the world that supported the Normandy Landings of 1944 (the other two belong to the United States Navy). *Belfast* also saw action during the Korean War before being decommissioned in 1963.

Now a branch of the Imperial War Museum, the ship's exhibitions have been reinterpreted to focus on the three most significant periods of its service – World War II, the end of the British empire, and the Cold War. New areas of the vessel have been opened up to visitors and, for the first time, the lives of key members of *Belfast*'s crew over the years will also be explored.

Richard III: Coming Home

9 JULY – 31 OCTOBER, YORKSHIRE MUSEUM, YORK

PAID ENTRY *yorkshiremuseum.org.uk/exhibition/richard-iii-coming-home*

York's most famous royal son is returning home – in picture form. The well-known National Portrait Gallery image of Richard III (*right*) will be on display at Yorkshire Museum, along with other objects connected to the much-maligned king.

Richard III was the last Yorkist monarch and images of the king are mostly based on this iconic 16th-century painting. The artwork is on loan from the National Portrait Gallery as part of its initiative to lend paintings to places closely associated with them, and will be displayed alongside the Middleham Jewel – a gold pendant found near Richard's northern home, Middleham Castle.

Other highlights include the Ryther Hoard, which includes coins minted during Richard's reign and that of his successor, Henry VII.

The Richard III portrait and the Ryther Hoard (*left*) will be on display

The Museum of the Home reopens

FROM 12 JUNE, LONDON

FREE ENTRY *museumofthehome.org.uk*

The Museum of the Home is reopening after a three-year refurbishment that has created 80 per cent more exhibition space. The museum is housed in a Grade I-listed 18th-century almshouse and tells the story of how we have lived in our homes in Britain over the past 400 years.

New rooms in the museum include the Victorian room – a London parlour, which is set up as if for a séance – and a 1970s-inspired front room, which considers the lives of African-Caribbean migrants to the UK. And, of course, there are old favourites including a 1630 hall, an 1830 drawing room and a loft-style apartment from 1998. The evolving role of domestic gardens is also explored, from their history as sites to grow medicinal herbs to areas in which to enjoy leisure time. Entry to the museum is free, but tickets must be booked in advance.

This 1870s-inspired parlour reflects the Victorian obsession with the afterlife, and is set up as if its occupants are conducting a séance

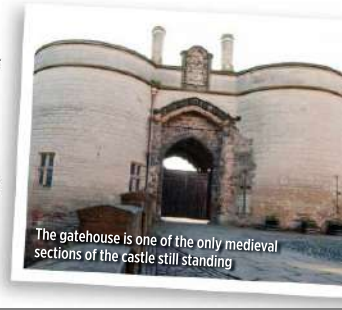
Nottingham Castle reopens

FROM 21 JUNE, NOTTINGHAM

PAID ENTRY *nottinghamcastle.org.uk*

Nottingham Castle will soon be reopening its doors to the public following a £30m revamp, made possible thanks to support from the National Lottery Heritage Fund. The castle now boasts a large outdoor adventure playground inspired by the legendary Robin Hood and his Sherwood Forest hideaway, while in an experienced dubbed 'Robin Hood Adventures', visitors will be able to try their hand at activities such as archery.

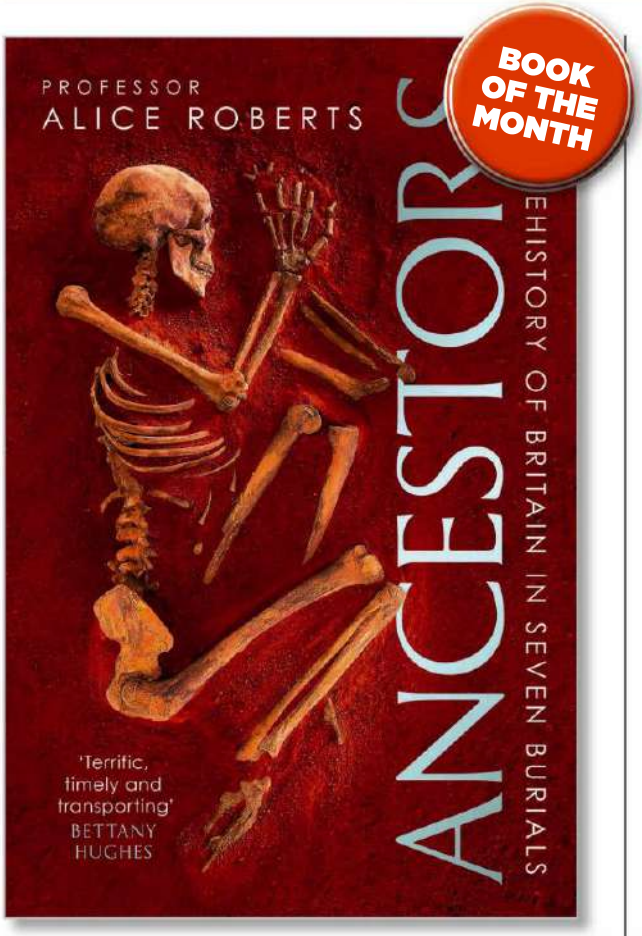
A new exhibition celebrating rebels throughout history and Nottingham's role in the Civil Wars will also be unveiled, and there will be the chance for visitors to explore the caves that run under the castle's foundations and extend outwards beneath the city.



The gatehouse is one of the only medieval sections of the castle still standing

BOOKS & PODCASTS

THIS MONTH'S BEST HISTORICAL READS AND LISTENS



Ancestors: A Prehistory of Britain in Seven Burials

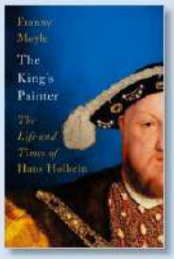
By Alice Roberts
Simon & Schuster, £20, hardback, 448 pages

Academic, writer and TV presenter Alice Roberts here brings her exuberant style to an exploration of how prehistoric people buried their dead. That may sound niche, but Roberts shows how it can tell us a great deal about how they came and went from Britain, the cultures they created, and the parallels with the present day. Indeed, new discoveries made possible by developments in the study of genetics bring those stories thrillingly into the 21st century.

The King's Painter: The Life and Times of Hans Holbein

By Franny Moyle
Apollo, £35, hardback, 576 pages

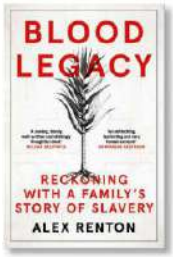
The 16th-century painter and printmaker Hans Holbein the Younger had a rare talent – and the good fortune to be alive at the same time as some of history's most famous figures. This beautifully presented illustrated biography tells his story, from his first international success to his time in England. It also offers the chance to enjoy some of Holbein's masterpieces in the company of an expert, including his portraits of Henry VIII and Jane Seymour. This fascinating account brings the Tudor era compellingly to life.



Blood Legacy: Reckoning With a Family's Story of Slavery

By Alex Renton
Canongate Books, £16.99, hardback, 400 pages

The enduring legacy of the horrors of the international slave trade has never strayed too far from the spotlight recently – but what do you do when you discover that your ancestors were slave and plantation owners? That's one of the questions at the heart of this extraordinary and, at times, upsetting book. It frames wider debates in very human terms and movingly explores how we might come to terms with the sins of the past.



Checkmate in Berlin: The Cold War Showdown That Shaped the Modern World

By Giles Milton
John Murray, £25, hardback, 416 pages

February, 1945: Churchill, Roosevelt and Stalin meet near Yalta to discuss the shape the world might take after World War II – including the thorny issue of Germany's capital, Berlin. That city came to be at the heart of what happened next, as alliances soured and the Cold War exerted an increasingly icy grip. Giles Milton is on vibrant form in this look at the years that defined the second half of the 20th century.

The Queen

By Matthew Dennison
Apollo, £25, hardback, 512 pages

Elizabeth II, so long a constant in British public life, has once again been in the headlines following the death of her husband, Prince Philip. This major new biography both chronicles the key moments in her life and the ways in which the nation has changed around her. Matthew Dennison argues that, through all of the social shifts, family dramas and political upheaval, the Queen's core message has continued unwavering: hope, praise and reassurance.

Adventures in Time: The Second World War

By Dominic Sandbrook
Particular Books, £14.99, hardback, 176 pages

You may have enjoyed his regular newspaper columns or his TV documentaries on 20th-century history, but now author and broadcaster Dominic Sandbrook turns his hand to writing for children. Sandbrook's *Adventures in Time* series retells key episodes in history for a young audience, with this entry engagingly charting World War II through a number of dynamic, vivid vignettes. Future books in the series are set to cover subjects including Henry VIII and Alexander the Great.

PODCAST WHAT TO LISTEN TO...

Each month we bring you three of our favourite podcasts from the BBC and HistoryExtra

Life in the Workhouse: Everything You Wanted to Know

bit.ly/WorkhousePod96

Partly thanks to the 1968 film *Oliver!*, we all think we know what life was like in the workhouse: bleak, gruelling, and not enough gruel. Yet how accurate is that view? In this HistoryExtra podcast, social historian Peter Higginbotham puts the record straight – and the truth may prove surprising.

You're Dead to Me: Boudica

bit.ly/BoudicaPod96

Greg Jenner's *You're Dead to Me* continues to be reliably rewarding stuff, and this episode on Celtic warrior queen Boudica is no exception. Greg is joined by historian Emma Southon and comedian (and former London tour guide) Sarah Pascoe to profile "the angriest woman in ancient Britain" – who continues to be a feminist icon today.

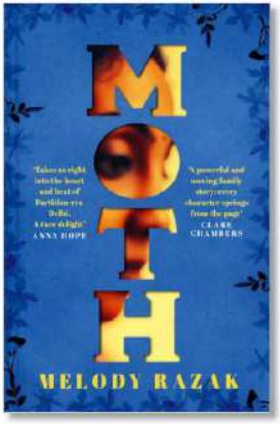
The History Hour

bit.ly/HistoryHourPod96

BBC World Service series *The History Hour* always features a smorgasbord of historical tales, told by the people who were there. This recent instalment covers typically diverse, often gritty subjects, including the decades-long fight to legalise contraception in Ireland, the use of biological weapons in South Africa's apartheid era, and the remarkable incident of the MP who took drugs for a TV experiment.

GETTY IMAGES X2

HISTORICAL FICTION...



Moth

By Melody Razak
24 June, Weidenfeld & Nicolson, £14.99

It's 1946 in Delhi and Ma and Bappu – both liberal lecturers at the local university – are preparing to marry off their 14-year-old daughter, Alma. Independence from Britain is looming on the horizon. While Alma is more focused on what shoes she'll wear at her wedding, her parents are apprehensive about her marrying at such a young age. However, it's a dangerous time to be a young girl in India, so this is a means of keeping her safe. When partition happens, the country they know will be broken up overnight and the family torn apart.

Excerpt

The story begins at the end. An unknown girl is preparing to sacrifice her daughter. The reader is left with the question not of what happens next, but why does it happen? Who is this girl?

In a makeshift sling across her chest, she holds a sleeping baby. A swaddled baby who drinks in her mother's scent, the promise of milk, and moves her mouth in quiet sucks like tight petals blooming.

In the dark corridor, she slips a hand into the sling, grips through the cotton the steel of a paring knife. Next to the knife is a vial of rosewater, next to the vial, a newspaper twist of turmeric.

She wishes she hadn't promised. Only, the birth had been so hard, with the old wounds unravelling, and the girl had thought she would surely die. She had not known the child pressed to her chest could be so warm.

She clutches the baby now and walks outside, stands on the garden path. It is raining.

I was not expecting you, says the girl to the rain.

I'm here for you, says the rain. I'm not supposed to be here at all. This will confuse everyone.

Thank you for coming.

The rain is as good as her word. Hot rainwater falls so fast and thick, she can barely open her eyes. Puddles of mud swell in every hole and dent.

The hibiscuses are flowering. She has waited nine months to see them open, and now that they have, she walks past them, doesn't see the petals like ripped hearts beckoning.

Q&A
Melody Razak

Before completing an MA in creative writing, Melody Razak ran a café and worked as a pastry chef. She has already published several short stories, but *Moth* is her first novel. Earlier this year, she was named as one of the *Observer*'s 10 best debut novelists of 2021.

What drew you to write a novel set during the partition of India?
Moth grew out of the BBC Radio 4 series *Partition Voices*. The raw emotion behind the voices of those being interviewed struck my heart. There was something behind what was not said, especially by the women, that stayed with me. I wanted to understand not only the political and geographical scale of partition, but the minutes of an individual woman's life. I was dismayed to learn about the number of women who were raped, and the children they bore and had to leave behind to be accepted back into society. A society that would often reject them all over again for their 'loss of honour'.

The concept of 'freedom' – crucial to India's independence, and one that lies at the heart of *Moth* – was to my mind a concept that was not only denied, but perhaps even mocked by partition. The borders created by religious intolerance, hate and violence cut much deeper than those that were created by geography.

What's your writing process like and how did you research the novel?
I read historical accounts of partition, along with newspapers, fiction, Indian folktales and myths. I also travelled India. Before I start writing, I ask myself, what do I believe in? What am I really trying to say? I aim for 1,000 words a day, read as much fiction as possible, try to have Sundays off, and drink endless cups of tea and coffee.

What would you like readers to take from *Moth*?
A desire to read further, not just into partition and Indian independence, but into those shifts in history that have shaped our societies and about which we are often ill-educated. There is also a sense of western accountability; the need to learn, and empathise.

Are there any other periods you'd like to write about?
I'm interested in the Ottoman empire, especially the all-female harems – all those betrayals and intrigues. I have a love for the Victorian and gothic, for Oliver Twist and the London he would have inhabited. Iran as it would have been during the time of the Shah, before the revolution and subsequent wars.

BBC RADIO 4 Listen to the three-part BBC Radio 4 series *Partition Voices* at *bbc.co.uk/programmes/b090rrl0*

CROSSWORD

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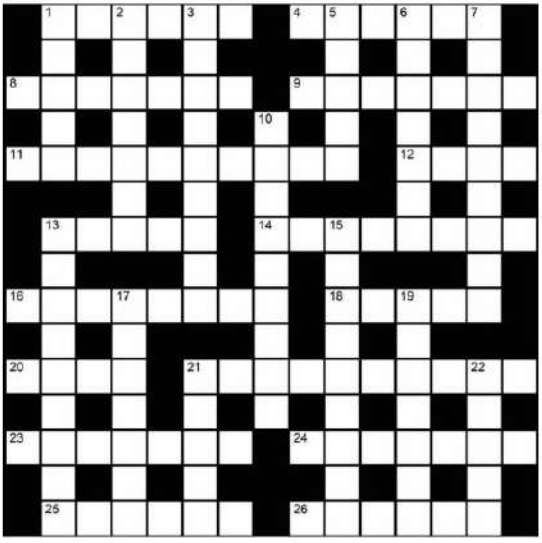
ACROSS

1 Daughter of the House of Capulet, in Shakespeare (6)
4 Hospital founded in 1247 as the Priory of the New Order of our Lady of Bethlehem (6)
8 Asian state formerly known as Burma (7)
9 Warlike women, in Greek mythology (7)
11 1846–48 conflict arising from the annexation of Texas by the US (7,3)
12 Industrial region of Germany, heavily bombed in 1943 (4)
13 Fashion magazine first published in 1892 (5)
14 Gopherwood vessel described in the Book of Genesis (5,3)
16 Ancient city of Nepal (old spelling) (8)
18 ___ Larsen (1895–1964), novelist of the Harlem Renaissance (5)
20 System of city layout, as seen in New York City and Adelaide (4)
21 Royal ___, British cavalry regiment, noted for its exploits at Waterloo (1815) (5,5)
23 Canadian anthem, written in 1880 (1,6)
24 Country of northwest Europe, formally a republic since 1949 (7)
25 City-state of ancient Greece (6)
26 Antisthenes and Diogenes, for example (6)

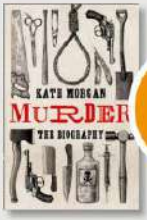
DOWN

1 William ___ (1906–46), British fascist nicknamed Lord Haw-haw (5)
2 State capital of Michigan since 1847 (7)
3 Town in Egypt, site of two key World War II battles (2,7)
5 ___ Gantry, 1926 novel by Sinclair Lewis (5)
6 Biblical character raised from the dead by Jesus (7)
7 Historical region of northeast Asia (9)
10 Welsh courtier, grandfather of Henry VII (4,5)
13 Latin term for the Way of the Cross, in Christianity (3,6)
15 Novel by Anne Brontë (5,4)
17 US pop star (b1958) (7)
19 Legendary siren of the Rhine (7)
21 Anwar ___ (1918–81), third President of Egypt (5)
22 Ibn ___ (d1009), Egyptian Muslim mathematician (5)



Set by Richard Smyth

CHANCE TO WIN



BOOK WORTH £16.99 FOR THREE WINNERS

Murder: The Biography
by Kate Morgan

HOW TO ENTER

Post entries to **BBC History Revealed, July 2021 Crossword, PO Box 501, Leicester LE94 0AA** or email them to **july2021@historyrevealedcomps.co.uk** by noon on **1 August 2021**.

By entering, participants agree to be bound by the terms and conditions shown in the box below. Immediate Media Co Ltd, publishers of *BBC History Revealed*, would love to keep you informed by post or telephone of special offers and promotions from the Immediate Media Co Group. Please write 'Do Not Contact IMC' if you prefer not to receive such information by post or phone. If you would like to receive this information by email, please write your email address on the entry. You may unsubscribe from receiving these messages at any time. For more about the Immediate Privacy Policy, see the box below.
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SOLUTION Nº 94

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The closing date and time is as shown under **How to Enter**, above. Entries received after that will not be considered. Entries cannot be returned. Entrants must supply full name, address and daytime phone number. Immediate Media Company (publishers of ***BBC History Revealed***) will only ever use personal details for the purposes of administering this competition, and will not publish them or provide them to anyone without permission. Read more about the Immediate Privacy Policy at www.immediatemedia.co.uk/privacy-policy. The winning entrants will be the first correct entries drawn at random after the closing time. The prize and number of winners will be as shown on the Crossword page. There is no cash alternative and the prize will not be transferable. Immediate Media Company London Limited's decision is final and no correspondence relating to the competition will be entered into. The winners will be notified by post within 28 days of the close of the competition. The name and county of residence of the winners will be published in the magazine within two months of the closing date. If the winner is unable to be contacted within one month of the closing date, Immediate Media Company London Limited reserves the right to offer the prize to a runner-up.
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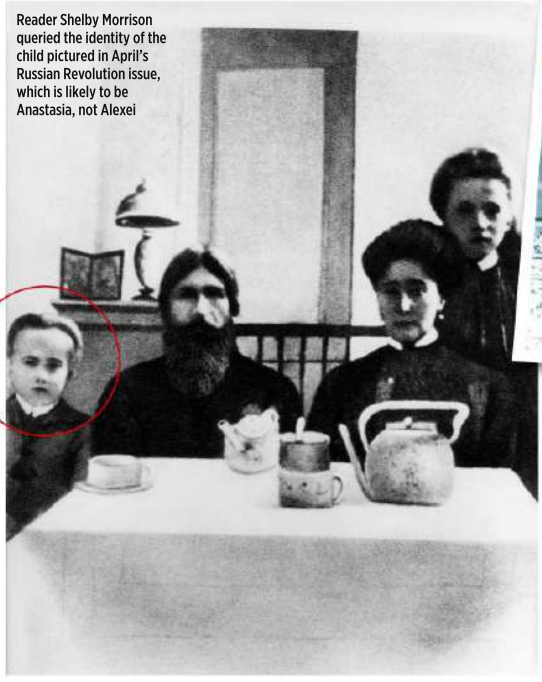
LETTERS



Reader Shelby Morrison queried the identity of the child pictured in April's Russian Revolution issue, which is likely to be Anastasia, not Alexei

Hermit Joseph Underhill starred in the June issues of both *BBC History Revealed* and *BBC History Magazine*

MYSTERY CHILD

I enjoyed your information-packed issue on the Russian Revolution (April 2021). It is amazing to me that you can cover so much material succinctly. I do have a query, though. In the photo on page 36, which purports to show Rasputin and the Tsarina in 1916, the child to Rasputin's right is cited as being Alexei. The child does not look like him, and nor are they old enough – Alexei was born in 1904. Also, the caption does not mention the girl standing behind the trio, who might be one of Alexandra's daughters or maybe a sibling of the unknown young boy.

Shelby Morrison,
Florida

Editor says:
Thank you for your comments, Shelby. Unfortunately, we were given incorrect information by the picture library from whom we procured the photograph. We've spoken to Helen Rappaport, who was our expert advisor for the guide, and she believes the child next to Rasputin may actually be Anastasia, and the young girl standing behind the Tsarina most likely Olga. If true, the picture would have been taken some years before 1916.

THEATRE'S DARK SIDE

The Essential Guide to William Shakespeare (May 2021), overseen by Dr Paul Edmondson of the Shakespeare Birthplace Trust, was an excellent piece of work. I've read it in one go on several occasions.

The guide mentioned that some of the actors of the time were children and that they often experienced harsh conditions. In addition, child actors were often forcibly snatched from the streets and threatened into performing; they were systematically exploited and abused.

Theatres in the 16th and 17th century reveal a dark underside of cruelty to children. From 1570 all the boys were performers. These children had been seized with violence and force, kept as captives and threatened with whipping. Kidnappings were not illegal as the theatre owners had licences to forcibly recruit children. Powers had been granted by Queen Elizabeth I's royal seal – they were known as Elizabeth I's child actors.

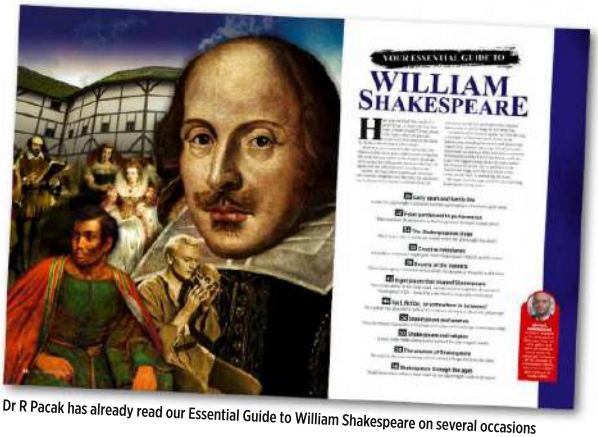
Thirteen-year-old Thomas Clifton was walking to school on 13 December 1600, when he was violently kidnapped – the men who took him claimed that they had legal authority to do so from Queen Elizabeth I herself. It was a practice known as impressment – forced recruitment into public service – which meant that children could be legally taken without their parents' or their own consent.

Dr R Pacak, OBE, by email

CORRECTIONS

▶ Keen-eyed readers of *BBC History Revealed* and our sister publication *BBC History Magazine* may have noticed that, quite by coincidence, we both featured the same image in our June issues, but offered different caption information in each magazine. Several readers have written to us to query the information. We've done some digging and can confirm that the image we labelled as a night soil man on page 76 is actually Joseph Underhill – also known as the Pailton miser – a secular hermit who lived in a five-foot-square pigsty in Pailton, near Rugby, and earned a living by acting as a drover. He died in 1891, as was cited in *BBC History Magazine*. The magazines obtained the pictures from different image libraries and, unfortunately, the caption information given to us was incorrect. Thank you to all who wrote in to query it.

▶ The image labelled as an effigy of Thomas Becket on page 25 of our June issue is actually the tomb of Archbishop of Canterbury William Courtenay, who died in 1511.



Dr R Pacak has already read our Essential Guide to William Shakespeare on several occasions

GETTY IMAGES X1, ALAMY X1

NEXT ISSUE

••• ON SALE 8 JULY •••

NAZI GERMANY

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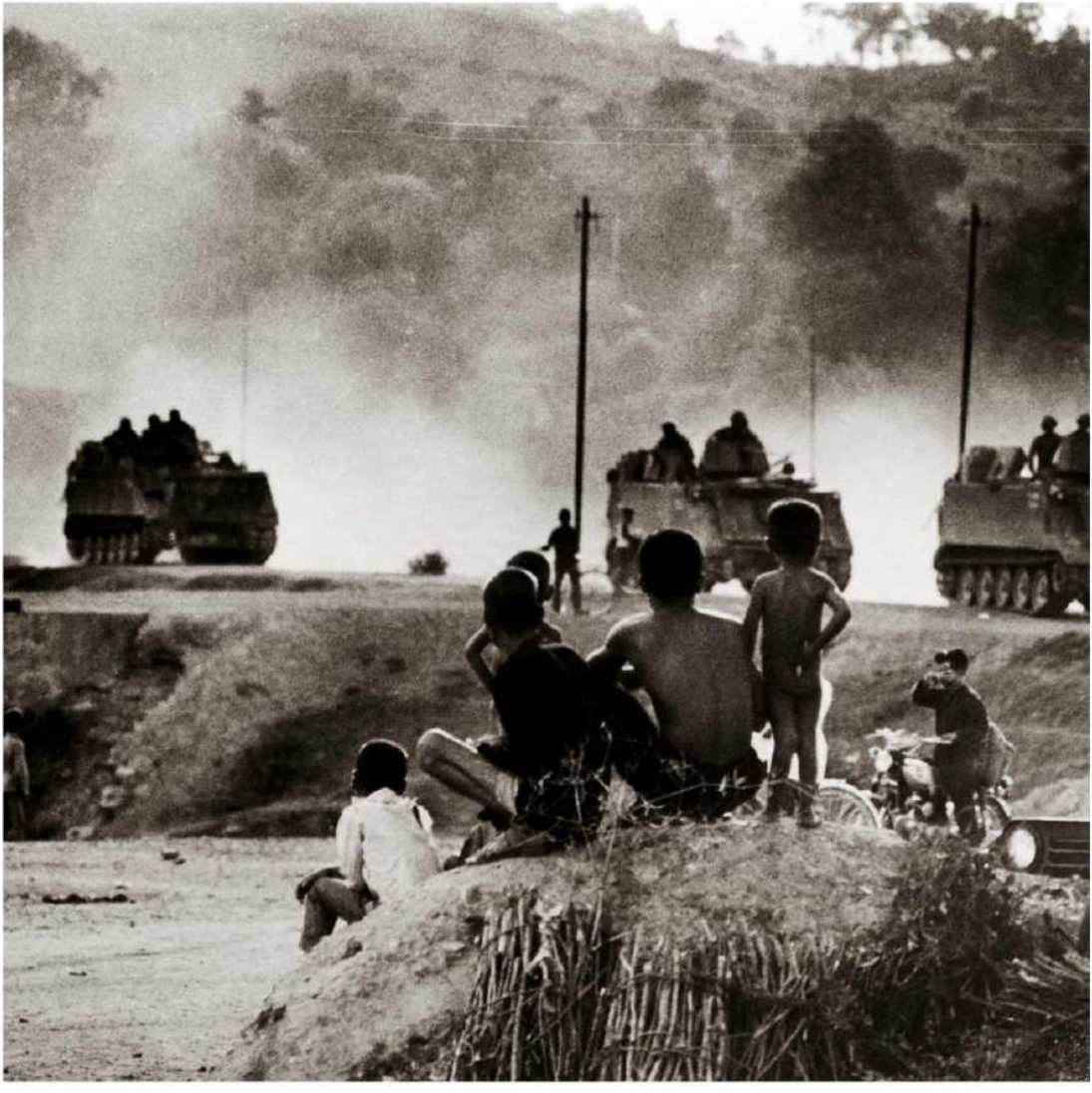

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